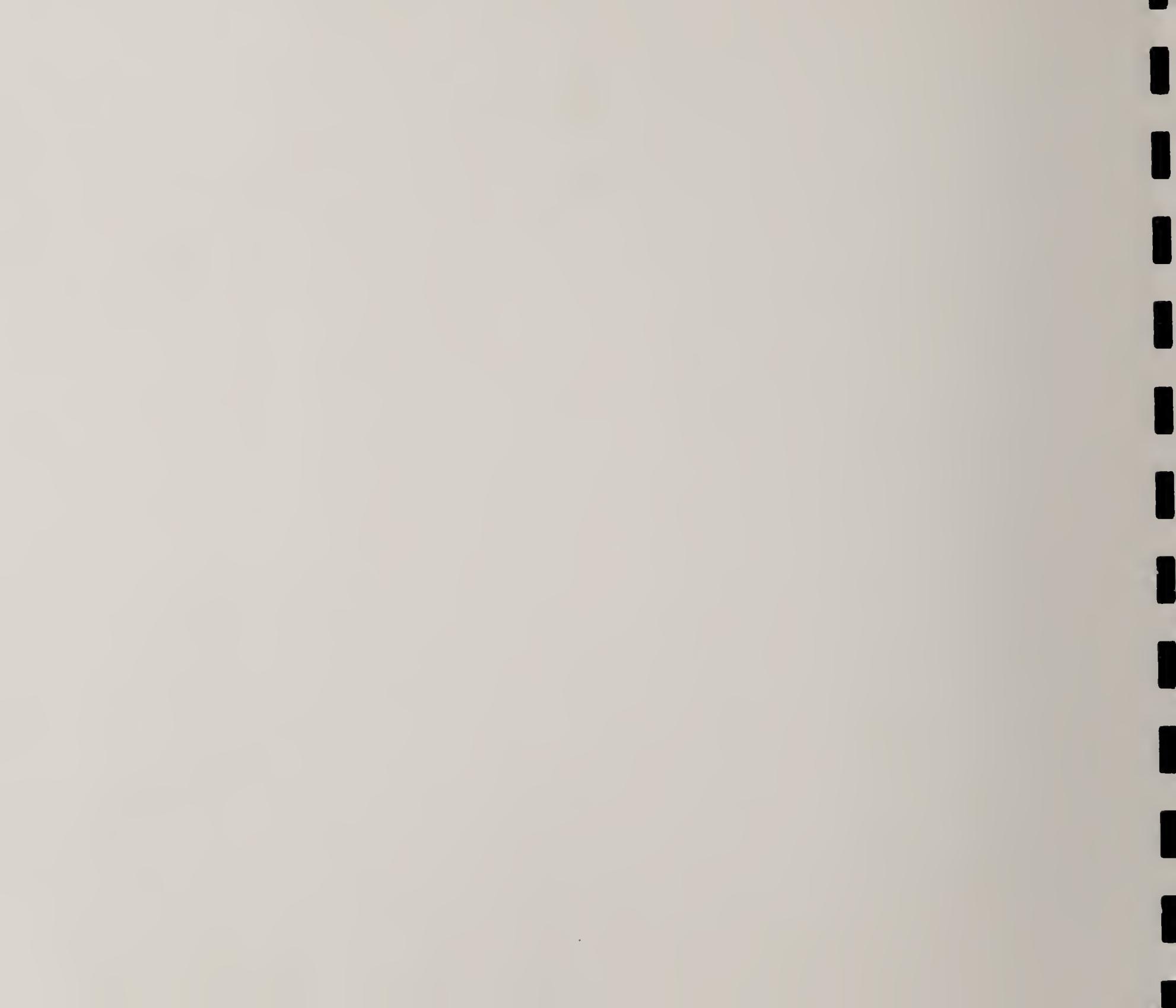


REV. MESS. W. B. LEWIS, MRCGP, MRCP, DCH, DTM

# the Health of the City of Leicester during 19



SEMPER EADE



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M.O.H. LEICESTER. 1971

Miss Earl A227 21/3/73 24 APR 1973

A faint, out-of-focus background image of a classical building with four columns and a triangular pediment, possibly the British Museum's portico.

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## Health Committee

(as constituted 18th May, 1972)

**Chairman** Coun Mrs J M Setchfield

**Vice-Chairman** Coun G W Billington

Coun M Clayton  
Coun Mrs L Davies  
Coun H Dunphy  
Coun J E S Ellis

Coun R A Flint  
Ald N R Hanger, MPS, JP  
Coun P Kind  
Coun J K McLaughlan

Rev Coun K F Middleton  
Coun Mrs F F L Riley  
Ald A R Williamson

**Co-opted Members** Dr A E Fairbrother

Miss M H Perkins

**Improvement Areas Sub-Committee** Coun G W Billington  
Coun Mrs L Davies  
Coun J E S Ellis

Ald N R Hanger, MPS, JP  
Coun P Kind  
Coun Mrs F F L Riley

Coun Mrs J M Setchfield  
Ald A R Williamson

# Senior Public Health Officers

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**Medical Officer of Health** B J L Moss, *MB, BS(London), MRCS, LRCP, DCH, DPH*

**Senior Medical Officer (Personal Health Services)** Stephanie A Laing, *MRCS, LRCP, CPH, DCH, DPH*

**Consultant Chest Physician** C M Connolly, *BSc, MD, MRCP, DPH*

**City Analyst** E R Pike *BSc(Aston), MChemA, MPhA, MPS, FIFST, FRIC*

**Chief Public Health Inspector** G A Hiller, *FRSH, FAPHI*

**Chief Administrative Assistant** G Cree, *DMA*

**Chief Administrative Nursing Officer** Jane I Jones, *SRN, SCM, QNS, HV, HV Tutor's Cert*

**Chief Ambulance Officer** D H Jones, *MIAI* (resigned as from 2.1.72)  
J McCafferty, *AIAO* (appointed as from 3.1.72)

*To the Chairman, the Lord Mayor, and Members of the  
City Health Committee*

Mr. Chairman, my Lord Mayor, Ladies and Gentlemen, The health of the public has shown considerable improvement compared with 100 years ago, but the factors influencing health and associated with the prevention of disease are constantly changing and it is essential that these changes be monitored in order that the appropriate action may be undertaken should circumstances arise that may be prejudicial to the health of the people.

Over the centuries the characteristics of the population of this country have been under-going change as a result of invasion and the arrival of immigrants from many parts of the world. But whereas in the past this was a slow process and often influenced only small sectors of the country, the past decade has been marked by substantial alterations in the proportion of the various ethnic groups making up the population of many cities and towns in this country. Furthermore, the distribution of immigrants has not been uniform and thus certain towns and even certain areas of towns have shown a remarkably quick change in the age structure and characteristics of the population within their boundaries. This has had a marked effect on housing, morbidity and mortality. The recent Census showed a hypothetical jump in the size of the population of some 10,000 people since the figures were given for last year but in view of the difficulty of obtaining accurate information, even from those who do speak English, it must be realised that this still remains an estimate and may still constitute an under-representation of the true population. For this reason amongst others, the use of the crude census figures alone may give an inadequate representation of the changes that have occurred in the numbers and social circumstances of the population.

Housing is a controversial subject on which much has been written by many people, thus it may be correct to assume that if there was a grand re-shuffle the number of

units of accommodation that could be made available within the City may be adequate for the various people who required accommodation, but there is no likelihood of such satisfactory re-deployment being reached on a voluntary basis. We are therefore faced with a situation where an old person may reside alone in one cold damp room of a six-roomed house. By contrast at the other extreme a family of 8 may be confined to one or two rooms in a house in multiple occupation with shared amenities. The prevalence of such conditions may not only lead to strife but a deterioration in the standards of the family and a lack of consideration for those around. The provision of adequate and suitable accommodation for those in need must be considered a priority. Whilst continuing in the attempt to provide housing at the minimum cost, may we not be failing to provide the right environmental conditions? Are the present day developments the slums of the future? Is the creation of a number of units of accommodation on a new housing estate the sole factor to be taken into consideration? Fear must be expressed that when development has taken place it has not always been associated with a corresponding provision of social amenities. More and more evidence is being compiled to indicate the problems of physical and mental ill-health that may arise where inadequate consideration has been given to both the immediate and long term effects of living in such conditions.

The United Nations conference in Stockholm on the Human Environment has indicated that there is an increasing awareness amongst environmentalists, demographers and ecologists of the number of hazards that are confronting mankind as a result of the rapid advances that have occurred in our industrial society. Contamination by inert substances, such as plastics and toxic chemicals has already occurred and the problem is likely to increase unless active steps are taken to prevent the indiscriminate disposal of a variety of waste products that may be detrimental to the health of the community. The litter blown about from

rubbish tips and the eyesore created by accumulating dumps of old cars constitute obvious reminders of some of the unpleasant aspects of the waste problem. Are we taking active steps to eradicate these nuisances? The development of smoke control areas may have removed unsightly black smoke from our city, but this is not enough and the public are increasingly demanding that action be taken against those who continue to pollute the atmosphere, the waterways and the land with little consideration for the hazard that may be created both immediately and in the long term. The recent report entitled 'The problem of persistent chemicals' published by the Organisation for Economic Co-operation and Development, emphasises the need to limit the use of a wide range of chemical substances if we are to avoid gross disturbance of the national ecology. Are we really only paying lip service to the problem of pollution?

The continued prevalence of tuberculosis amongst certain sections of the community has been a cause for concern. Whilst the development of sophisticated diagnostic techniques may be of help in identifying the disease, making a diagnosis is one thing, ensuring that the patient obtains the appropriate treatment and the necessary support, both to speed his recovery and to prevent the spread of disease is of the utmost importance. At the present time the task of prevention is being seriously hampered by a failure to provide the back-up resources necessary for such an operation.

We are faced with a number of Health problems—high density housing, a multi-racial population, a steadily mounting geriatric problem and the erroneous belief that the problems of to-day can be tackled with the limited resources made available in the past. It is to be hoped that there will be some urgent and radical re-thinking given to the allocation of resources to the Community Health Services. We are aware of the tasks but without the manpower resources the task is physically impossible. Perhaps one day it will be realised that the standard of service that can be provided is

proportional to the expenditure. In the same way that failure to provide adequate and satisfactory materials to construct a house may lead to progressive deterioration and ultimate collapse so may the failure to provide staff result in detriment to the patient. It is as well to remember that we shall all be patients at one time or another.

I am,  
Mr. Chairman, my Lord Mayor, Ladies and Gentlemen,  
Your obedient servant,  
B. J. L. MOSS, M.B, B.S, D.P.H.  
*Medical Officer of Health*

Health Department  
Midland House  
52-54 Charles Street  
Leicester  
(Tel. No. 25732)  
June, 1972



|   | 1971       | 1970      |
|---|------------|-----------|
| Population (estimated) mid 1971   | 282000     | 276690    |
| Population at Census, 23rd April 1961   | 273298     | 273298    |
| Marriages   | 2663       | 2870      |
| Area Comparability Factor: Births   | 1.04       | 1.04      |
| Deaths  | 0.98       | 0.98      |
| Live births (corrected):  |            |           |
| Number  | 4756       | 4863      |
| Rate per 1000 population (standardised birth rate=17.60)  | 16.79      | 17.58     |
| Number of illegitimate live births  | 587        | 629       |
| Illegitimate live births per cent of total live births  | 12.0       | 12.93     |
| Stillbirths: Number   | 62         | 61        |
| Stillbirth rate per 1000 total live and stillbirths   | 13.0       | 12.39     |
| Illegitimate stillbirth rate per 1000 total illegitimate live & stillbirths   | 13.45      | 21.77     |
| Total live and stillbirths  | 4818       | 4924      |
| Infant deaths (deaths under 1 year)   | 107        | 102       |
| Infant mortality rates:   |            |           |
| Total infant deaths per 1000 total live births  | 22.0       | 20.97     |
| Legitimate infant deaths per 1000 legitimate live births  | 21.0       | 20.08     |
| Illegitimate infant deaths per 1000 illegitimate live births  | 31.0       | 27.03     |
| Neo-natal mortality rate (deaths under four weeks per 1000 total live births)   | 14.0       | 11.31     |
| Early neo-natal mortality rate (deaths under one week per 1000 total live births)   | 13.0       | 10.28     |
| Perinatal mortality rate (stillbirths and deaths under one week combined per 1000 total live and stillbirths)   | 26.0       | 22.54     |
| Illegitimate perinatal mortality rate (illegitimate stillbirths and illegitimate deaths under one week combined per 1000 total illegitimate live and stillbirths) | 28.57      | 27.99     |
| Legitimate perinatal mortality rate (legitimate stillbirths and legitimate deaths under one week combined per 1000 total legitimate live and stillbirths)         | 25.10      | 21.72     |
| Maternal mortality (including abortion):  |            |           |
| Number of deaths  | 5          | 4         |
| Rate per 1000 total live and stillbirths  | 1.0        | 0.81      |
| Deaths (corrected for transferable deaths)  | 3474       | 3452      |
| Death rate (standardised death rate=12.10)  | 12.32      | 12.47     |
| Area of city (in acres)   | 18144      | 18144     |
| Number of inhabited tenements January 1972  | 91285      | 90741     |
| Number of empty houses January 1972   | 2651       | 2528      |
| Rateable value at 1st April   | £15676819  | £15580412 |
| General rate for the year 1971/72:  |            |           |
| Total rate poundage levied  | 76.5p in £ | 72p in £1 |
| For domestic properties (dwelling houses)   | 67p in £1  | 63p in £1 |
| For mixed properties (mainly domestic)  | 72p in £1  | 67p in £1 |
| <i>Registrar-General's figures – England and Wales</i>  |            |           |
| 1971  |            |           |
| Birth rate  | 16.0       | 16.0      |
| Death rate  | 11.6       | 11.7      |
| Infant mortality rate (per 1000 births)   | 18.0       | 18.0      |

**Causes of death** at different periods of life during 1971

| Cause of death                                 | Total<br>sex all ages | 4 wks<br>under<br>4 under<br>wks 1 year | Age in years |     |     |     |      |       |       |       |       |
|--|-----------------------|---|--------------|-----|-----|-----|------|-------|-------|-------|-------|
|  |                       |   | 1—           | 5—  | 15— | 25— | 35—  | 45—   | 55—   | 65—   | 75+   |
| B4 Enteritis and other Diarrhoeal diseases     | <i>m</i> 3            | . 1                                     | . .          | . . | . . | . . | . .  | . .   | 1     | . .   | 1     |
|  | <i>f</i> 4            | . 1                                     | 1 1          | . . | . . | . . | . .  | . .   | . .   | . .   | 1     |
| B5 Tuberculosis of Respiratory System          | <i>m</i> 5            | . .                                     | . .          | . . | . . | . . | . .  | . .   | 1 1   | 1 1   | 2     |
|  | <i>f</i> 1            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | 1     | . .   |
| B6(2) Other Tuberculosis                       | <i>m</i> 1            | . .                                     | . .          | . . | . . | . . | . .  | . .   | 1     | . .   | . .   |
|  | <i>f</i> 2            | . .                                     | . .          | 1 . | . . | . . | 1 .  | . .   | . .   | . .   | . .   |
| B9 Whooping Cough                              | <i>m</i> .            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | . .   | . .   |
|  | <i>f</i> 1            | . .                                     | . .          | 1 . | . . | . . | . .  | . .   | . .   | . .   | . .   |
| B10 Streptococcal Sore Throat, Scarlet Fever   | <i>m</i> .            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | . .   | . .   |
|  | <i>f</i> 1            | . .                                     | . .          | . . | . . | . . | 1 .  | . .   | . .   | . .   | . .   |
| B11 Meningococcal Infection                    | <i>m</i> 1            | . .                                     | . .          | 1 . | . . | . . | . .  | . .   | . .   | . .   | . .   |
|  | <i>f</i> .            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | . .   | . .   |
| B17 Syphilis and its sequelae                  | <i>m</i> .            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | . .   | . .   |
|  | <i>f</i> 1            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | 1     | . .   |
| B18 Other Infective and Parasitic Diseases     | <i>m</i> 3            | . 1                                     | 1 1          | . . | . . | . . | . .  | . .   | . .   | 1     | . .   |
|  | <i>f</i> 5            | . 2                                     | . .          | . . | 1 . | . . | . .  | . .   | 1 .   | . .   | 1     |
| B19(1) Malignant Neoplasm, Buccal Cavity, etc. | <i>m</i> 5            | . .                                     | . .          | . . | . . | . . | . .  | . .   | 1 2   | 1 1   | 1     |
|  | <i>f</i> .            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | . .   | . .   |
| B19(2) Malignant Neoplasm, Oesophagus          | <i>m</i> 10           | . .                                     | . .          | . . | . . | . . | . .  | . .   | 2 4   | 4 .   | . .   |
|  | <i>f</i> 8            | . .                                     | . .          | . . | . . | . . | . .  | . .   | 1 2   | 2 5   | . .   |
| B19(3) Malignant Neoplasm, Stomach             | <i>m</i> 51           | . .                                     | . .          | . . | . . | . . | . .  | 1 3   | 17 18 | 12 12 | . .   |
|  | <i>f</i> 30           | . .                                     | . .          | . . | . . | . . | . .  | 2 7   | 7 9   | 12 12 | . .   |
| B19(4) Malignant Neoplasm, Intestine           | <i>m</i> 44           | . .                                     | . .          | . . | . . | . . | . .  | 1 1   | 6 14  | 22 22 | . .   |
|  | <i>f</i> 45           | . .                                     | . .          | . . | . . | . . | . .  | 2 7   | 7 9   | 27 27 | . .   |
| B19(5) Malignant Neoplasm, Larynx              | <i>m</i> 1            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | 1     | . .   |
|  | <i>f</i> 1            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | 1     | . .   |
| B19(6) Malignant Neoplasm, Lung, Bronchus      | <i>m</i> 158          | . .                                     | . .          | . . | . . | . . | . .  | 3 11  | 52 75 | 17 17 | . .   |
|  | <i>f</i> 22           | . .                                     | . .          | . . | . . | . . | . .  | 2 6   | 6 11  | 3 3   | . .   |
| B19(7) Malignant Neoplasm, Breast              | <i>m</i> 1            | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | . .   | 1     |
|  | <i>f</i> 63           | . .                                     | . .          | . . | . . | . . | 1 .  | 11 16 | 19 16 | . .   | . .   |
| B19(8) Malignant Neoplasm, Uterus              | <i>f</i> 29           | . .                                     | . .          | . . | . . | . . | 1 .  | 5 5   | 5 5   | 13 13 | 5 5   |
| B19(9) Malignant Neoplasm, Prostate            | <i>m</i> 27           | . .                                     | . .          | . . | . . | . . | . .  | . .   | . .   | 1 13  | 13 13 |
| B19(10) Leukaemia                              | <i>m</i> 7            | . .                                     | . .          | . . | 1 1 | . . | . .  | 1 1   | 1 1   | 3 .   | . .   |
|  | <i>f</i> 6            | . .                                     | . .          | . . | . . | . . | . .  | 1 2   | 1 1   | 2 2   | . .   |
| B19(11) Other Malignant Neoplasms              | <i>m</i> 94           | . .                                     | . .          | . . | . . | 2 4 | 4 10 | 11 48 | 11 48 | 19 19 | . .   |
|  | <i>f</i> 89           | . .                                     | . .          | 1 . | . . | 2 1 | . .  | 9 16  | 9 16  | 28 28 | 32 32 |
| B20 Benign and unspecified Neoplasms           | <i>m</i> 6            | . .                                     | . .          | . . | . . | 1 . | . .  | . .   | 2 1   | 3 2   | . .   |
|  | <i>f</i> 7            | . .                                     | . .          | . . | . . | 1 . | . .  | 1 1   | 1 1   | 2 2   | 2 2   |
| B21 Diabetes Mellitus                          | <i>m</i> 14           | . .                                     | . .          | . . | . . | . . | . .  | 2 1   | 4 6   | 7 6   | 8 8   |
|  | <i>f</i> 15           | . .                                     | . .          | . . | 1 . | . . | . .  | . .   | . .   | . .   | . .   |

**Causes of death continued**

|        | Cause of death                       | Total<br>sex all ages | 4 wks<br>under<br>4 under<br>wks 1 year | Age in years |    |     |     |     |     |     |     |     |
|--------|--------------------------------------|-----------------------|---|--------------|----|-----|-----|-----|-----|-----|-----|-----|
|        |                                      |                       |   | 1—           | 5— | 15— | 25— | 35— | 45— | 55— | 65— |     |
|        | B22 Avitaminoses, etc.               | <i>m</i><br><i>f</i>  | 1                                       | .            | .  | .   | .   | .   | .   | .   | .   | 1   |
| B46(1) | Other Endocrine etc. Diseases        | <i>m</i><br><i>f</i>  | 3<br>8                                  | .            | .  | .   | .   | 1   | .   | .   | 1   | 1   |
|        | B23 Anaemias                         | <i>m</i><br><i>f</i>  | 3<br>8                                  | .            | 1  | .   | .   | .   | .   | 1   | 1   | 1   |
| B46(2) | Other diseases of Blood, etc.        | <i>m</i><br><i>f</i>  | 1<br>.                                  | .            | .  | .   | .   | .   | 1   | .   | .   | .   |
|        | B46(3) Mental Disorders              | <i>m</i><br><i>f</i>  | 1<br>5                                  | .            | .  | .   | 1   | .   | .   | .   | 1   | 1   |
|        | B24 Meningitis                       | <i>m</i><br><i>f</i>  | 3<br>.                                  | 1            | 1  | .   | .   | 1   | .   | .   | .   | .   |
|        | B46(4) Multiple Sclerosis            | <i>m</i><br><i>f</i>  | 1<br>.                                  | .            | .  | .   | .   | .   | 1   | .   | .   | .   |
| B45(5) | Other diseases of Nervous System     | <i>m</i><br><i>f</i>  | 20<br>11                                | .            | .  | .   | .   | 4   | 1   | 1   | 2   | 3   |
|        | B26 Chronic Rheumatic Heart Disease  | <i>m</i><br><i>f</i>  | 18<br>28                                | .            | .  | .   | .   | .   | 1   | 1   | 6   | 7   |
|        | B27 Hypertensive Disease             | <i>m</i><br><i>f</i>  | 27<br>29                                | .            | .  | .   | .   | .   | .   | 3   | 1   | 9   |
|        | B28 Ischaemic Heart Disease          | <i>m</i><br><i>f</i>  | 451<br>316                              | .            | .  | .   | .   | 2   | 9   | 51  | 97  | 150 |
|        | B29 Other forms of Heart Disease     | <i>m</i><br><i>f</i>  | 112<br>154                              | .            | .  | 1   | .   | 1   | 1   | 4   | 35  | 84  |
|        | B30 Cerebrovascular Disease          | <i>m</i><br><i>f</i>  | 210<br>309                              | .            | .  | .   | .   | 1   | .   | 3   | 7   | 26  |
| B45(6) | Other diseases of Circulatory System | <i>m</i><br><i>f</i>  | 59<br>80                                | .            | .  | .   | .   | .   | 1   | 2   | 8   | 15  |
|        | B31 Influenza                        | <i>m</i><br><i>f</i>  | 2<br>.                                  | .            | .  | .   | .   | .   | .   | .   | 1   | 1   |
|        | B32 Pneumonia                        | <i>m</i><br><i>f</i>  | 106<br>123                              | 1            | 7  | 1   | .   | 1   | .   | 2   | 3   | 9   |
|        | B33(1) Bronchitis and Emphysema      | <i>m</i><br><i>f</i>  | 117<br>36                               | .            | 1  | .   | .   | .   | 1   | 6   | 23  | 49  |
|        | B33(2) Asthma                        | <i>m</i><br><i>f</i>  | 2<br>4                                  | .            | .  | .   | .   | 1   | .   | .   | 1   | 1   |
| B46(7) | Other diseases of Respiratory System | <i>m</i><br><i>f</i>  | 24<br>8                                 | 2            | 8  | .   | .   | .   | 1   | 2   | 5   | 6   |
|        |                                      |                       |   | .            | 1  | .   | .   | 2   | .   | 1   | 1   | 4   |

**Causes of death continued**

|  | Cause of death                                | Total<br>sex all ages                | 4 wks<br>under<br>4 under<br>wks 1 year |    | Age in years |         |         |          |          |          |           |            |            |            |
|--|---|--------------------------------------|---|----|--------------|---------|---------|----------|----------|----------|-----------|------------|------------|------------|
|  |   |                                      | 1—                                      | 5— | 15—          | 25—     | 35—     | 45—      | 55—      | 65—      | 75+       |            |            |            |
|  | B34 Peptic Ulcer                              | <i>m</i><br>15<br><i>f</i><br>6      | .                                       | .  | .            | .       | .       | .        | 1        | 1        | 2         | 3<br>8     |            |            |
|  | B35 Appendicitis                              | <i>m</i><br>1<br><i>f</i><br>2       | .                                       | .  | .            | 1       | .       | .        | .        | .        | .         | 1          |            |            |
|  | B36 Intestinal Obstruction and Hernia         | <i>m</i><br>11<br><i>f</i><br>12     | 2                                       | .  | .            | .       | .       | .        | 1        | .        | 1         | 2<br>5     |            |            |
|  | B37 Cirrhosis of Liver                        | <i>m</i><br>10<br><i>f</i><br>4      | .                                       | .  | .            | 1       | .       | .        | 3        | 5<br>1   | 1         | .          |            |            |
|  | B46(8) Other diseases of Digestive System     | <i>m</i><br>13<br><i>f</i><br>36     | .                                       | 1  | .            | 1       | .       | .        | 1        | 1<br>4   | 3<br>9    | 8<br>17    |            |            |
|  | B38 Nephritis and Nephrosis                   | <i>m</i><br>8<br><i>f</i><br>9       | .                                       | .  | .            | .       | .       | .        | 1        | 1<br>1   | 1<br>1    | 4<br>4     |            |            |
|  | B39 Hyperplasia of Prostate                   | <i>m</i><br>11                       | .                                       | .  | .            | .       | .       | .        | .        | .        | .         | 3<br>8     |            |            |
|  | B46(9) Other diseases, Genito-Urinary System  | <i>m</i><br>7<br><i>f</i><br>13      | .                                       | .  | 1            | .       | .       | .        | 3        | 2<br>2   | 4<br>4    | 4<br>3     |            |            |
|  | B40 Abortion                                  | <i>f</i><br>2                        | .                                       | .  | .            | .       | .       | 1        | 1        | .        | .         | .          |            |            |
|  | B46(10) Diseases of Skin, Subcutaneous Tissue | <i>m</i><br>.                        | .                                       | .  | .            | .       | .       | .        | .        | .        | .         | .          |            |            |
|  | B46(11) Diseases of Musculo-Skeletal System   | <i>m</i><br>7<br><i>f</i><br>8       | .                                       | .  | .            | .       | .       | .        | 1        | 2<br>1   | 1<br>3    | 3<br>4     |            |            |
|  | B42 Congenital Anomalies                      | <i>m</i><br>17<br><i>f</i><br>14     | 4                                       | 5  | 2            | 5       | .       | .        | 1        | .        | .         | .          |            |            |
|  | B43 Birth injury, Difficult Labour, etc.      | <i>m</i><br>15<br><i>f</i><br>5      | 14                                      | 1  | .            | .       | .       | .        | .        | .        | .         | .          |            |            |
|  | B44 Other causes of Perinatal mortality       | <i>m</i><br>16<br><i>f</i><br>13     | 16                                      | .  | .            | .       | .       | .        | .        | .        | .         | .          |            |            |
|  | B45 Symptoms and ill-defined conditions       | <i>m</i><br>3<br><i>f</i><br>17      | .                                       | 1  | .            | .       | .       | .        | .        | 1        | .         | 2<br>16    |            |            |
|  | BE47 Motor Vehicle accidents                  | <i>m</i><br>27<br><i>f</i><br>10     | .                                       | 1  | 2            | 3       | 7       | 2        | 2        | 2        | .         | 5<br>1     |            |            |
|  | BE48 All other accidents                      | <i>m</i><br>28<br><i>f</i><br>50     | .                                       | 1  | 2            | 3       | 1       | 1        | 5        | 3        | 2         | 9<br>10    |            |            |
|  | BE49 Suicide and self-inflicted injuries      | <i>m</i><br>11<br><i>f</i><br>14     | .                                       | .  | .            | .       | 1       | 3        | .        | 5        | .         | 2<br>5     |            |            |
|  | BE50 All other external causes                | <i>m</i><br>10<br><i>f</i><br>6      | .                                       | .  | .            | 1       | .       | 2        | .        | 3        | 3         | 2<br>2     |            |            |
|  | Total all causes                              | <i>m</i><br>1801<br><i>f</i><br>1673 | 40                                      | 27 | 27           | 10<br>7 | 12<br>8 | 19<br>15 | 15<br>11 | 37<br>11 | 137<br>68 | 305<br>168 | 581<br>387 | 618<br>958 |

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## Blind Persons

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I am indebted to the Director of Social Services for the information included in this Section.

Classification according to age (at date of registration) of **blind persons** registered in 1971

|              | 0        | 1 | 2 | 3 | 4 | 5-10 | 11-15 | 16-20 | 21-29 | 30-39 | 40-49 | 50-59 | 60-64 | 65-69 | 70-79 | 80-84 | 85-89 | 90+ | Total |     |
|--------------|----------|---|---|---|---|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-----|
| Cataract     | <i>m</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | 3     | .     | 1     | 2   | 6     |     |
|              | <i>f</i> | . | . | . | . | .    | .     | .     | .     | .     | 1     | .     | .     | .     | 9     | 10    | 4     | 1   | 25    |     |
| Glaucoma     | <i>m</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | 1     | 1     | .     | .     | .     | .     | .   | 2     |     |
|              | <i>f</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | 1     | .     | 5     | 2     | 3     | .   | 11    |     |
| Retrolental  | <i>m</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | .     | .     | .     | .   | .     |     |
| Fibroplasia  | <i>f</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | .     | .     | .     | .   | .     |     |
| Others       | <i>m</i> | . | . | . | . | .    | .     | .     | .     | 1     | 1     | .     | .     | 3     | .     | 8     | 2     | 2   | .     |     |
|              | <i>f</i> | . | . | 1 | . | .    | .     | .     | 1     | 1     | .     | .     | 4     | .     | 4     | 13    | 11    | 5   | 17    |     |
| <b>Total</b> |          | . | . | 1 | . | .    | .     | .     | 1     | 2     | 1     | 1     | 5     | 5     | 4     | 38    | 25    | 15  | 4     | 102 |

These figures include 21 cases (4 male, 17 female) transferred from the partially sighted register.

Classification according to age (at date of registration) of **partially sighted persons** registered in 1971

|              | 0        | 1 | 2 | 3 | 4 | 5-10 | 11-15 | 16-20 | 21-29 | 30-39 | 40-49 | 50-59 | 60-64 | 65-69 | 70-79 | 80-84 | 85-89 | 90+ | Total |   |    |
|--------------|----------|---|---|---|---|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|---|----|
| Cataract     | <i>m</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | 2     | 1     | 2     | 1   | .     |   |    |
|              | <i>f</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | 2     | .     | 1     | .   | 6     |   |    |
| Glaucoma     | <i>m</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | 1     | .     | .     | .   | 1     |   |    |
|              | <i>f</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | 1     | .     | 2     | .   | 4     |   |    |
| Retrolental  | <i>m</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | .     | .     | .     | .   | .     |   |    |
| Fibroplasia  | <i>f</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | .     | .     | .     | .     | .     | .   | .     |   |    |
| Others       | <i>m</i> | . | . | . | . | .    | .     | .     | .     | 1     | .     | .     | 1     | 1     | .     | 1     | 1     | .   | 5     |   |    |
|              | <i>f</i> | . | . | . | . | .    | .     | .     | .     | .     | .     | .     | 1     | .     | 1     | 5     | 2     | 1   | 12    |   |    |
| <b>Total</b> |          | . | . | . | . | .    | .     | .     | .     | .     | 1     | .     | .     | 2     | 3     | 3     | 7     | 7   | 2     | 3 | 28 |

These figures include 1 male transferred from the blind register.

**Follow-up of registered blind and partially sighted persons 1971**

| 1 Number of cases registered during the year<br>in respect of which section (D) of form BD8 recommends: | Cause of disability |          |                            |        |
|---|---------------------|----------|----------------------------|--------|
|   | Cataract            | Glaucoma | Retrolental<br>Fibroplasia | Others |
| a No treatment  | 18                  | 9        | .                          | 45     |
| b Treatment<br>(medical, surgical or optical)   | 9                   | 5        | .                          | 17     |
| 2 Number of cases at 1(b) above which on follow-up action have received treatment:                      | 4                   | 5        | .                          | 17     |

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## Care of Mothers and Young Children

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Care of Mothers and young children

| Infant deaths   | Legitimate       |           |              |          |               |   |                 |           |              |           |                  |          | Illegitimate   |   |               |   |                 |          |              |          |            |    |   |   | All infant deaths<br>Grand Total |  |  |
|---|------------------|-----------|--------------|----------|---------------|---|-----------------|-----------|--------------|-----------|------------------|----------|----------------|---|---------------|---|-----------------|----------|--------------|----------|------------|----|---|---|----------------------------------|--|--|
|   | Age at death     |           |              |          |               |   |                 |           |              |           |                  |          | Cause of death |   |               |   |                 |          |              |          |            |    |   |   |                                  |  |  |
|   | Less than 24 hrs |           | Under 1 week |          | Under 28 days |   | 1 mth to 1 year |           | Total deaths |           | Less than 24 hrs |          | Under 1 week   |   | Under 28 days |   | 1 mth to 1 year |          | Total deaths |          | m          |    | f |   |                                  |  |  |
| Birth injury, tentorial tear, haemorrhage etc.                      | 3                | 3         | 1            | .        | .             | . | .               | .         | 4            | 3         | 1                | 1        | .              | . | .             | . | .               | .        | .            | 1        | 1          | 9  |   |   |                                  |  |  |
| Pneumonia, bronchopneumonia tracheo-bronchitis                      | .                | .         | .            | .        | 1             | . | 6               | 1         | 7            | 1         | .                | .        | .              | . | .             | . | .               | .        | 1            | .        | 1          | .  | 9 |   |                                  |  |  |
| Anoxia, Asphyxia  | 3                | 3         | 1            | .        | .             | . | .               | .         | 4            | 3         | 1                | .        | .              | . | .             | . | .               | .        | .            | 1        | .          | 8  |   |   |                                  |  |  |
| Respiratory distress syndrome                                       | 1                | 1         | 1            | 1        | .             | . | .               | .         | 2            | 2         | 1                | .        | 1              | . | .             | . | .               | .        | 2            | .        | 6          |    |   |   |                                  |  |  |
| Prematurity (including 13 under 28 weeks gestation)                 | 12               | 7         | 2            | 1        | .             | . | .               | .         | 14           | 8         | 4                | 3        | .              | . | 1             | . | .               | .        | 5            | 3        | 30         |    |   |   |                                  |  |  |
| Acute upper respiratory tract infection                             | .                | .         | .            | .        | .             | . | 9               | 1         | 9            | 1         | .                | .        | .              | . | .             | . | .               | 1        | .            | 1        | .          | 11 |   |   |                                  |  |  |
| Congenital malformations (including spina bifida and heart defects) | 3                | 1         | 2            | 3        | 1             | . | 5               | 3         | 11           | 7         | .                | .        | .              | . | .             | . | .               | .        | 2            | .        | 2          | 20 |   |   |                                  |  |  |
| Gastroenteritis   | .                | .         | .            | .        | .             | . | 1               | 2         | 1            | 2         | .                | .        | .              | . | .             | . | .               | .        | .            | .        | .          | 3  |   |   |                                  |  |  |
| Septicaemia and bacteraemia   | .                | .         | .            | .        | .             | . | 2               | .         | 2            | .         | .                | .        | .              | . | .             | . | .               | 1        | 1            | 1        | 1          | 4  |   |   |                                  |  |  |
| Meningitis  | .                | .         | 1            | .        | .             | . | 1               | .         | 2            | .         | .                | .        | .              | . | .             | . | .               | .        | .            | .        | .          | 2  |   |   |                                  |  |  |
| Adrenal hypoplasia  | .                | .         | .            | .        | .             | . | 1               | .         | 1            | .         | .                | .        | .              | . | .             | . | .               | .        | .            | .        | .          | 1  |   |   |                                  |  |  |
| Fractured skull   | .                | .         | .            | .        | .             | . | 1               | .         | 1            | .         | .                | .        | .              | . | .             | . | .               | .        | .            | .        | .          | 1  |   |   |                                  |  |  |
| Cardiac failure (during exchange transfusion)                       | .                | .         | 1            | .        | .             | . | .               | .         | 1            | .         | .                | .        | .              | . | .             | . | .               | .        | .            | .        | .          | .  | 1 |   |                                  |  |  |
| Congenital cytomegalic inclusion body disease                       | .                | .         | .            | .        | .             | . | .               | .         | .            | .         | .                | .        | .              | . | 1             | . | .               | .        | .            | .        | .          | 1  | . | 1 |                                  |  |  |
| Road traffic accident   | .                | .         | .            | .        | .             | . | 1               | .         | 1            | .         | .                | .        | .              | . | .             | . | .               | .        | .            | .        | .          | .  | 1 |   |                                  |  |  |
| Ruptured jejunum  | .                | .         | .            | .        | .             | . | .               | 1         | .            | 1         | .                | .        | .              | . | .             | . | .               | .        | .            | .        | .          | .  | 1 |   |                                  |  |  |
| <b>Totals</b>   | <b>22</b>        | <b>15</b> | <b>9</b>     | <b>5</b> | <b>2</b>      | . | <b>24</b>       | <b>11</b> | <b>57</b>    | <b>31</b> | <b>7</b>         | <b>4</b> | <b>2</b>       | . | <b>1</b>      | . | <b>3</b>        | <b>3</b> | <b>13</b>    | <b>7</b> | <b>108</b> |    |   |   |                                  |  |  |
| Sudden unexpected deaths in infancy                                 | .                | .         | .            | 1        | .             | . | 12              | 3         | 13           | 3         | .                | .        | .              | . | .             | . | .               | 1        | .            | 1        | .          | 17 |   |   |                                  |  |  |

**Congenital malformations detected at birth - 1971**

*Live Births*

|  |           |
|--|-----------|
| Myelomeningocele ± hydrocephalus               | 9         |
| Hydroencephalocele                             | 1         |
| Hydrocephalus                                  | 1         |
| Anencephalic                                   | 1         |
| Down's Syndrome and bilateral talipes          | 1         |
| Down's Syndrome                                | 1         |
| Extra digits                                   | 5         |
| Missing digits                                 | 1         |
| Hammer toe                                     | 1         |
| Abnormality of left arm                        | 1         |
| Extra digits, large ears, small jaw and palate | 1         |
| Talipes  | 12        |
| Talipes and hypospadias                        | 1         |
| Hypospadias                                    | 6         |
| Hypospadias and pilonidal sinus                | 1         |
| Perineal fistula and imperforate anus          | 1         |
| Imperforate anus and anal polyp                | 1         |
| Imperforate anus                               | 1         |
| Abnormal genitals                              | 1         |
| Enlarged liver and spleen                      | 1         |
| Exomphalus (1 umbilical)                       | 2         |
| Hare lip and cleft palate                      | 3         |
| Hare lip                                       | 1         |
| Facial palsy                                   | 1         |
| Birth mark                                     | 1         |
| Osteo-genesis imperfectum                      | 1         |
| Small growth on neck                           | 1         |
| Left pinna and left auditory canal absent      | 1         |
| <b>Total</b>                                   | <b>59</b> |

*Stillbirths*

|                                  |          |
|----------------------------------|----------|
| Myelomeningocele ± hydrocephalus | 5        |
| Anencephalic                     | 2        |
| Anencephaly and exomphalus       | 1        |
| <b>Total</b>                     | <b>8</b> |

## **Handicapped children**

### *Observation-Handicap Register*

It is now well accepted that there are certain factors, which, should they occur, may cause damage to the young child. These factors may occur either before or after birth or may be due to inherited or acquired conditions. In an attempt to recognise such damage at the earliest possible moment in time and therefore to be in a position to offer support and treatment, a register is kept. This register relates to factors which have a high risk of subsequent handicap. The infant's progress can then be assessed until such time as development can be considered to be progressing normally. If, however, a defect is detected, then the infant's name is transferred to the Handicap Register and the condition tabulated. The child is assessed at regular intervals, and at 2 years a forecast is made regarding the probable education.

During 1971, 864 cases were placed on the Observation Register and 220 on the Handicap Register. This latter figure includes 46 cases which were transferred from the Observation Register.

The number placed on the Observation Register has increased by 90 in the past year. In the case of the Handicap Register, the number placed in the year 1971 has shown an increase from 175 to 220. It is only in a small proportion of these cases that there will be a severe residual handicap but there are continuing indications which point to the inescapable fact that this section of the community is growing. The number of children surviving but having a substantial defect may not be large when considered in isolation but the problem is very different when one begins to consider particular provisions for each individual case. In any one case, for example, a child who is born with a congenital handicap such as spina bifida, it can be reasonably expected that this child will require home nursing, transport, special appliances, housing, special school and finally further training for eventual employment in sheltered in-

dstry. The long term cost in terms of resource needs is therefore considerable.

It is interesting to note that during the past year 11 cases of rickets have been placed on the Register. This condition has not been evident in recent years but is now requiring treatment. Over one third of the cases occurred in children of Asian parents.

### *Development Clinics*

Development Clinics continue to be held at Midland House twice a week.

These sessions provide an opportunity for more detailed observation of the child than is possible at the Child Health Clinics, and also for general discussion between the various persons interested in the child's welfare. In a subsidiary role – but no less important – the clinic is used for parent and staff teaching. During the year 88 sessions were held and 88 children were seen for the first time and 97 for follow-up visits.

Subsequent to the initial assessment at the Development Clinic it may be possible to offer placement for the child at either Parkfield Special Nursery School, Spastic Society Day Nursery or the British Red Cross Creche. When a child is placed at a special nursery the follow-up Development Clinic appointment takes place at the nursery. This allows the parent, teachers, Specialist Health Visitors and Medical Officers to get together for full discussion.

Parkfield Special Nursery was transferred from the Health Department to Education in April 1971. This pilot venture which was started by the Health Department in October 1969 has proved of great value to the assessment process. It has shown repeatedly that a child with a substantial handicap can benefit immeasurably from continued observation and simultaneous stimulation. The nursery provided 20 places for children between the ages of 2 and 5. Since the majority of these places were allocated on a part-time basis of either two or three full days attendance per week, it

enabled a possible 40 children to benefit at any one time. During the first two years – of which the first 18 months were under the aegis of the Health Department – some 43 children were discharged from the nursery.

Of these,

19 were placed at special schools for physically handicapped  
6 at normal schools  
10 at mentally handicapped schools  
5 left the area  
2 were withdrawn by parents  
1 died.

Health Department Medical Officers continue to visit regularly the residential and day nurseries now transferred to the Social Services Department.

#### Audiology

During the year a day course conducted by Dr Cochrane and Mrs Colledge (Peripatetic Teacher for the Deaf) was held for Health Visitors involved in screening test procedures. The course was repeated to allow 44 Health Visitors to participate.

Some 236 appointments were kept at the Audiology Clinic during the year, of which 159 were new cases and 77 follow-up appointments. The Clinic continues to be staffed by three Senior Health Visitors and two Medical Officers. All personnel have attended courses in Audiology at Manchester University. The Health Visitors give freely of their time to attend the Clinic on a rota system, and their support is greatly appreciated. Mrs Colledge followed up children who attend the Clinic and also supervised auditory training sessions for 15 pre-school children. These sessions took place either at the child's home or in a group situation at Midland House. Mrs Colledge also visited the Special Nursery schools where children with impaired hearing are placed, to train the children and give supportive help to the staff.

**Table of Handicaps in pre-school children 1971**

|   | Year of birth | 1967 | 1968 | 1969 | 1970  | 1961 | Total |
|---|---------------|------|------|------|-------|------|-------|
| Neural Tube Defects                         | 7             | 5    | 8    | 10   | 6     | 36   |       |
| Severely subnormal                          | 5             | 10   | 14   | 6    | 2     | 37   |       |
| E.S.N. and Mongol                           | 8             | 11   | 8    | 9    | 4     | 40   |       |
| Psych. and Maladj.                          | 1             | .    | .    | .    | .     | 1    |       |
| Epilepsy                                    | 13            | 11   | 10   | 8    | 1     | 43   |       |
| Blind                                       | .             | 2    | 3    | .    | .     | 5    |       |
| Partially sighted                           | 2             | 5    | 3    | .    | .     | 10   |       |
| Deaf  | 3             | 1    | 9    | 1    | .     | 14   |       |
| Partially hearing                           | 3             | .    | .    | .    | 1     | 4    |       |
| Cardiovascular                              | 9             | 18   | 15   | 17   | 9     | 68   |       |
| Asthma                                      | 14            | 6    | 2    | 5    | .     | 27   |       |
| Fibrocystic                                 | 3             | 2    | 4    | .    | .     | 9    |       |
| Other respiratory disease                   | 1             | .    | .    | 1    | .     | 2    |       |
| Endocrine and Metabolic                     | 9             | 8    | 11   | 11   | 1     | 40   |       |
| Speech, Language disorders and Cleft palate | 3             | 5    | 5    | 6    | 3     | 22   |       |
| Urogenital system                           | 6             | 5    | 7    | 9    | 7     | 34   |       |
| Cerebral palsy                              | 5             | 7    | 12   | 7    | .     | 31   |       |
| Orthopaedic & locomotion                    | 16            | 21   | 21   | 20   | 7     | 85   |       |
| Miscellaneous                               | 7             | 2    | 7    | 4    | 3     | 23   |       |
|   |               |      |      |      | Total | 531  |       |

The table of Handicapped Preschool Children indicates the types and numbers of cases likely to be occurring at school. This is substantially less than those originally placed on the Handicap Register. The reason for this is that some will have died, some moved away and some been successfully treated. It is hoped that the computer system now being developed will enable a more detailed analysis to be undertaken that facilitates accurate planning of special school places.

## Abortion

Table 1

|             | 1969 | 1970 |
|-------------|------|------|
| Single      | 99   | 221  |
| Married     | 66   | 134  |
| Unspecified | 19   | 46   |
|             | 184  | 401  |

It is now possible to make the first comparison of annual abortion figures since the Abortion Act came into force. As expected the number of legal abortions have increased. The number of single women have increased by 130% and abortions for married women have doubled compared with the previous year. These figures cannot be lightly dismissed and it is necessary to examine a number of factors.

Table 2

|            | 1969 | 1970 | Increase |
|------------|------|------|----------|
| Under 16   | 11   | 14   | 3        |
| 16 - 19    | 39   | 96   | 57       |
| 20 - 34    | 99   | 234  | 135      |
| 35 - 44    | 29   | 54   | 25       |
| 45+        | 2    | 2    |          |
| Not stated | 4    | 1    |          |

### Under 16 years of age

How did these children become exposed to the risk of pregnancy? What was their social education and psychological background? Did they at the same time run the risk of, or contract, venereal disease?

It may be considered that 14 pregnant girls under the age of 16 in the city of the size of Leicester is not unexpected but should this prevalence be accepted? Before condemning the teen-agers can the community be exonerated from all responsibility? Have adequate opportunities been provided not only to impart information on the mechanics of sex but also to teach a full appreciation of the responsibilities devolving on those participating in sexual intercourse.

### 16-19 year olds

Past moral values and conventions are not necessarily acceptable to the new generation. Instead of Victorian pontification, would active measures be better to try and

prevent the misfortune of an unwanted pregnancy by making advice on contraception and facilities readily available? The chance of contracting venereal disease must also be brought to the attention of those at high risk.

## Place of Operation

Table 3

|      | Leicester C.B.  | Outside C.B.          |                 |                       |
|------|-----------------|-----------------------|-----------------|-----------------------|
|      | N.H.S. Hospital | Other abortion clinic | N.H.S. Hospital | Other abortion clinic |
| 1970 | 84              | .                     | 6               | 311                   |

It is particularly disturbing to note that local facilities are so inadequate that 3 times as many women had to resort to areas outside Leicester to obtain help and advice. Even if they did obtain an abortion one wonders how many were provided with the essential after-care that was necessary. Secondly how many women had to face the decision on their own of whether to continue with the pregnancy or to resort to a criminal abortion, because of inability to obtain help and advice locally?

The fact that an abortion is necessary is an indication of failure, perhaps failure in education, perhaps failure to accept responsibility, perhaps failure to provide a secure environment for those at risk. Table 3 is particularly disquieting for it shows that three times as many women obtain their abortion outside the Leicester City area. This inevitably creates difficulties in maintaining good communication between private clinics, perhaps many miles away from the general practitioners. Furthermore one must consider the risk to which the woman is exposed on returning to Leicester after an abortion when she may not be fit to travel, secondly there is the risk of inadequate follow-up -- the operation may have been a success in so far as it has removed a foetus but what damage was caused to the girl, medically or psychologically? What action has been taken to prevent a recurrence?

### *Complications of Abortion*

In the case of criminal abortion the risks of perforation and sepsis are high, but even under good conditions it must be recognised that the operation carries risks thus:

1 : 5 patients will lose a pint or more of blood

1 : 10 will require a transfusion

1 : 20 suffer damage to the uterus which includes perforation of the uterus.

For example,

- (1) the illegitimate child has a 50% chance of being supported by supplementary benefits throughout its childhood.
- (2) He will use  $4\frac{1}{2}$  times the child-care resources consumed by the average child.
- (3) He is twice as likely to be in temporary accommodation for the homeless.

Some of the additional factors noted in the P.E.P. Report are perhaps surprising. Thus the father of 4 children takes 1.3 times as many days of sickness absence than the father of 3 children. Furthermore one half of the unmarried women with children depend upon supplementary benefits and that the child of a one parent family is likely to use nine times as much in child care resources as the average child.

### **Illegitimacy**

**Total number of Illegitimate Births registered during 1971** 685

**Number of City Illegitimate births** 522

**Number of County Illegitimate Births** 163

### **City Illegitimate Births in age groups**

| Years   | 14  | 3 |
|---------|-----|---|
| 15      | 9   |   |
| 16      | 31  |   |
| 17      | 53  |   |
| 18      | 45  |   |
| 19      | 33  |   |
| 20      | 32  |   |
| over 20 | 316 |   |

During the course of the year 595 illegitimate children were born in the city and at the time of writing this report an account has been published of the costs and benefits of family planning. In this review by P.E.P. (Political and Economic Planning) an independent and non-party organisation, figures are quoted for the cost annually of each illegitimate pregnancy.

Although the cost of preventing such births would work out at approximately £34 per year, that is, providing the facilities for family planning services, paying the staff and doctors and the cost of supplies, failure to prevent a birth may result in the cost to the community of over £4,000 per unwanted child.

Analysis of work done in 1971

| Casework figures<br>1971 |   | City       | County      | Total        |
|--------------------------|---|------------|-------------|--------------|
|                          | <i>Short-term advice and enquiries</i>        | 86         | 33          | 119          |
|                          | <i>Long-term cases registered</i>             |            |             |              |
|                          | pregnancies                                   | 130        | 86          | 216          |
|                          | other problems                                | 21         | 11          | 32           |
|                          | <b>Total</b>                                  | <b>237</b> | <b>130</b>  | <b>367</b>   |
|                          | <i>1970 and previous years still active</i>   |            |             |              |
|                          | pregnancies                                   | 34         | 28          | 62           |
|                          | other problems                                | 55         | 30          | 85           |
|                          | <b>Total caseload</b>                         | <b>326</b> | <b>188</b>  | <b>514</b>   |
|                          | <i>Babies born</i>                            |            |             |              |
|                          | 1970 cases                                    | 31         | **26        | **57         |
|                          | 1971 cases                                    | 97         | 68          | 165          |
|                          | <b>Total</b>                                  | <b>128</b> | <b>**94</b> | <b>**222</b> |
|                          | <i>With mother in parental home</i>           |            |             |              |
|                          | With mother in own home                       | 87         | *54         | *141         |
|                          | With mother in lodgings                       |            |             |              |
|                          | With parents married                          | 3          | .           | 3            |
|                          | In temporary foster home                      | 2          | 3           | 5            |
|                          | In Local Authority care                       | 2          | 1           | 3            |
|                          | Placed with adopting parents                  | 31         | *33         | *64          |
|                          | Stillborn                                     | 1          | 2           | 3            |
|                          | Died  | 2          | 1           | 3            |
|                          | Miscarriage                                   | 1          | .           | 1            |
|                          | Referred on or lost trace                     | 1          | 6           | 7            |
|                          | Unborn 31.12.71                               | 31         | 14          | 45           |
|                          | <i>Babies fostered during the year</i>        | 41         | 42          | 83           |
|                          | <i>Mother and Baby Home admissions</i>        | 5          | 7           | 12           |
|                          | <i>Grant-aid to fees from Trusts and L.A.</i> | 12         | 3           | 15           |
|                          | <i>Putative fathers interviewed</i>           | 71         | 39          | 110          |
|                          |   |            |             | 21           |

## Adoption

|  |       |
|--|-------|
| Adopters' Enquiries  | 586   |
| Applications investigated (2 refused)  | 100   |
| Babies offered for adoption  | **119 |
| Withdrawn by mother before placement   | 6     |
| Placed with prospective adopters (incl. 4 from 1970<br>and 40 from Peterborough Diocese) | **108 |
| Withdrawn by mother after placement  | 4     |
| Withdrawn at adopters' request   | 1     |
| Placement delayed (medical grounds)  | .     |
| Awaiting placement 31.12.71  | 6     |
| Adoption Orders made   | **104 |

\* = twins)

\*\* = 2 sets of twins

## Age Groups

### Natural Mothers

|          | City | County |
|----------|------|--------|
| Under 17 | 29   | 16     |
| 17 - 20  | 58   | 44     |
| 21 - 30  | 33   | 21     |
| 31 plus  | 10   | 5      |

### Natural Fathers

|           |    |    |
|-----------|----|----|
| Under 17  | 17 | 6  |
| 17 - 20   | 42 | 37 |
| 21 - 30   | 46 | 22 |
| 31 plus   | 10 | 10 |
| Not known | 15 | 11 |

### Natural Mother's Status

|           |     |    |
|-----------|-----|----|
| Single    | 106 | 75 |
| Married   | 5   | 4  |
| Separated | 15  | 5  |
| Divorced  | 2   | 2  |
| Widowed   | 2   | .  |

### Natural Father's Status

|                  |    |    |
|------------------|----|----|
| Single           | 71 | 51 |
| Married          | 26 | 10 |
| Separated        | 18 | 12 |
| Widowed-Divorced | 6  | 4  |
| Not known        | 9  | 9  |

## Adoptions 1971

Babies placed include 2 sets of twins, i.e. 108 placements, 110 babies

### Normal Domicile

|   | Natural mothers | Adopters |
|---|-----------------|----------|
| Leicester                                 | 32              | 15       |
| Leicestershire                            | 34              | 68       |
| Northampton                               | 10              | 4        |
| Northamptonshire                          | 16              | 13       |
| Peterborough                              | 7               | 6        |
| Rutland                                   | 4               | 2        |
| Cambs/Newcastle/Belfast/Hereford/Dumfries | 5               | .        |

## Dental Report for 1971

R. H. Bettles, BDS, DDH, U Birm, LDS, DDPH, RCS Eng.

## Maternity and Child Welfare

This year has seen another increase in the amount of dental treatment provided for preschool children with a decrease in that sought by expectant and nursing mothers. Overall an increased amount of work has resulted from a similar number of treatment sessions as in the previous year. This part of the activities of the local authority dental service still represents only a small proportion of its work (about 4%), though many children attending nursery classes of schools are included in the school children statistics which appear in the Annual Report of the Principal School Medical Officer.

Efforts are being continued to influence the mothers of young children to seek dental treatment for their offspring from an early age, and this year has seen a rather higher number of requests to supply speakers to a variety of interest groups for young mothers, guides, parent teacher associations and the like. These requests are always welcomed and, it is hoped in the long term, will increase the tendency to bring children to our clinics, or to visit general dental service practitioners from the age of about 3 years.

The special schools that formerly were covered in this report have now been transferred to the Education Department, though the work of the dental service has continued on exactly the same lines as before, all these schools receiving a dental inspection during the year.

**Dental Services for Expectant and Nursing Mothers and Children under 5 years**

**Attendances and Treatment**

| Number of Visits for Treatment during year  |                         |                                  |
|---|-------------------------|----------------------------------|
|   | Children<br>0-4 (incl.) | Expectant and<br>nursing mothers |
| First visit   | 344                     | 57                               |
| Subsequent visits   | 479                     | 206                              |
| Total visits  | 823                     | 263                              |
| Number of additional courses of treatment other than the first course commenced during year | 19                      | 14                               |
| Treatment provided during the year:   |                         |                                  |
| Number of fillings  | 740                     | 185                              |
| Teeth filled  | 592                     | 154                              |
| Teeth extracted   | 434                     | 170                              |
| General anaesthetics given  | 145                     | 14                               |
| Emergency visits by patients  | 88                      | 3                                |
| Patients X-rayed  | 9                       | 12                               |
| Patients treated by scaling and/or removal of stains from the teeth (Prophylaxis)           | 79                      | 37                               |
| Teeth otherwise conserved   | 82                      | .                                |
| Teeth root filled   | .                       | 1                                |
| Inlays  | .                       | .                                |
| Crowns  | .                       | .                                |
| Number of courses of treatment completed during the year                                    | 249                     | 32                               |

**Prosthetics**

|   |    |
|---|----|
| Patients supplied with F.U. or F.L.<br>(First time) | 8  |
| Patients supplied with other dentures               | 8  |
| Number of dentures supplied                         | 23 |

**Anaesthetics**

|  |   |
|--|---|
| General anaesthetics administered by dental officers | 2 |
|--|---|

**Inspections**

|  |     |    |
|--|-----|----|
| Number of patients given first inspections during year | 558 | 67 |
| Number of patients who required treatment              | 324 | 64 |
| Number of patients who were offered treatment          | 318 | 63 |
| Number of patients re-inspected during year            | 72  | 14 |

**Sessions**

|   |     |
|---|-----|
| Number of Dental Officer Sessions (i.e. equivalent complete half days) devoted to Maternity and Child Welfare Patients: |     |
| For treatment   | 187 |
| For Health Education  | 37  |

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# Nursing Services

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Report for the year 1971

*Miss Jane I. Jones, S.R.N., S.C.M., Q.N.S., H.V.,*

*H.V. Tutor's Cert.*

*Chief Administrative Nursing Officer*

## Midwifery

The decline in the domiciliary confinements continued in 1971 representing 16.86% of the total births. Amongst the mothers delivered in hospital 11.9% were discharged within 48 hours and 35.1% within 5 days of delivery.

## Midwifery

### Notification of intention to practice

163

Of the above:

|                                    |     |
|------------------------------------|-----|
| Domiciliary Midwives               | 31  |
| Employed in private nursing homes  | 8   |
| Emergency notifications (Part III) | 2   |
| Employed in Maternity Hospitals    | 122 |

## Ante-Natal Clinics

|      | No. of sessions | 1st visit | Re-visits | Total |
|------|-----------------|-----------|-----------|-------|
| 1971 | 201             | 386       | 957       | 1343  |
| 1970 | 201             | 671       | 1387      | 2058  |

## Midwives and General Practitioner/Obstetricians

The following figures show the distribution of work between the domiciliary midwives in relation to the 804 deliveries attended during 1971.

### Deliveries attended by a midwife

|   |                                   |     |
|---|-----------------------------------|-----|
| a | i Doctor not booked, but present  | 1   |
|   | ii Doctor not booked, not present | 12  |
| b | i Doctor booked, and present      | 35  |
|   | ii Doctor booked, not present     | 756 |
|   | Total                             | 804 |

## Application for maternity beds in hospital on sociological grounds

|                            |      |
|----------------------------|------|
| Total number of applicants | 1655 |
| Number recommended         | 1318 |

94.5% of those recommended were accepted for hospital confinement.

## Waiting List

In all, 58 patients were originally placed on the waiting list. Of these:

24 patients obtained a hospital booking before delivery date.

20 patients were admitted as 'Social emergencies'.

13 patients were delivered by a domiciliary midwife at home.

1 patient moved from the area.

## Flying Squad

This was called twice by a doctor and both these cases were transferred to hospital.

## Patients confined in hospital

The planned early discharge scheme continued as before. The midwife saw the patient twice in the ante-natal period and in each case visited the mother and baby until the 10th day before passing her over to the care of the health visitor.

## Summary of hospital discharges

| Day of discharge   | 1  | 2   | 3   | 4   | 5   | 6   | 7    | 8   | 9   | Total |
|--|----|-----|-----|-----|-----|-----|------|-----|-----|-------|
| Number of patients   | 51 | 423 | 587 | 180 | 156 | 321 | 1117 | 182 | 158 | 3175  |
| 16,252 visits were paid to 3,175 patients before the 10th day. |    |     |     |     |     |     |      |     |     |       |

## Maternal deaths

Five maternal deaths occurred in the city during 1971:

- 1 I(a) Subarachnoid haemorrhage
- 1 II Viral encephalitis
- 2 Septic abortion
- 3 I(a) Subarachnoid haemorrhage  
(b) Bronchopneumonia
- 4 I(a) Cardiac arrest (Hyperkalaemia)  
(b) Vomiting and pulmonary collapse  
(c) Left diaphragmatic eventration (with pregnancy)
- 5 B Welchii septicaemia due to septic abortion.

## Staffing

The approved establishment remained at 39. At the end of 1971 there were 21 full-time and 7 part-time midwives in post. There were three appointments of full-time midwives and one part-time midwife. Four midwives left the service and

one retired from full-time work and became a part-time midwife.

#### **Summary of work done by domiciliary midwives**

| Staff     | Cases attended | Ante Natal | Visits     |               |              |
|-----------|----------------|------------|------------|---------------|--------------|
|           |                |            | Post Natal | Socio-logical | Total visits |
| Full Time | 795            | 13711      | 26767      | 2668          | 43941        |
| Part Time | 9              | 1254       | 4308       | 805           | 6376         |
| Totals    | 804            | 14965      | 31075      | 3473          | 50317        |

Domiciliary confinements decreased once more by 102 during 1971 and sociological visits decreased by 711.

#### **Training of pupil midwives**

During 1971 52 pupil midwives received domiciliary training with an approved teaching midwife.

#### **Obstetric Nurses**

Twenty-nine nurses doing the Obstetric Nurse Training Course at Leicester Royal Infirmary Maternity Hospital spent a day on the district with a midwife to gain an insight into domiciliary midwifery.

#### **Confinements and visiting**

| Year | Place of Birth |             |       | +<br>—    | Early discharge patients | +<br>—    | Early discharge visits | +<br>—     | Total visits |
|------|----------------|-------------|-------|-----------|--------------------------|-----------|------------------------|------------|--------------|
|      | Hospital       | Domiciliary | Total |           |                          |           |                        |            |              |
| 1967 | 3872           | 1451        | 5323  | +142<br>— | 2831                     | +733<br>— | 13924                  | +1965<br>— | 62224        |
| 1968 | 3998           | 1223        | 5221  | —102<br>— | 3106                     | +275<br>— | 16452                  | +2528<br>— | 60294        |
| 1969 | 4124           | 1053        | 5177  | —44<br>—  | 3236                     | +130<br>— | 17683                  | +1231<br>— | 55995        |
| 1970 | 4011           | 914         | 4925  | —252<br>— | 3262                     | +26<br>—  | 18668                  | +985<br>—  | 54506        |
| 1971 | 3980           | 807         | 4787  | —138<br>— | 3175                     | —87<br>—  | 16252                  | —2416<br>— | 49513        |

## Maternities and Neo-Natal deaths

|  | 1969 | 1970  | 1971  |
|--|------|-------|-------|
| Live births notified under Public Health Act, 1936         | 5101 | 4865  | 4756  |
| Stillbirths notified under Public Health Act, 1936         | 76   | 59    | 62    |
| *Immigrant live births                                     | 995  | 1079  | 965   |
| Immigrant still births                                     | 19   | 12    | 21    |
| *Immigrant live births as % of total live births           | 19.5 | 22.17 | 20.29 |
| % sociological bookings                                    | 45.3 | 49.1  | 23.5  |
| Immigrant stillbirths as % of immigrant total births       | 1.7  | 1.11  | 2.13  |
| Immigrant first week deaths as % of immigrant total births | 1.3  | 0.6   | 0.6   |

\*The immigrant figures are based on the surnames on birth notifications etc. and are approximate figures only.

## Health Visiting

The continued shortage of health visitors has in no way diminished their performance in terms of visiting during the past year.

General practitioner attachment is now the rule and the pattern of work is changing slowly. This year there has been an increase in the visits made to the elderly.

The second phase of clerical assistance to health visitors was introduced into Central Division in June 1970 with few problems. The experience gained from the pilot scheme in Belgrave Division the previous year was of value in preventing difficulties. Staff were instructed in the use of pocket tape recorders and once they had gained confidence the extension of the scheme was successfully achieved. The final phase of audio/typist support for health visiting staff will be introduced in May 1972 to West End Division.

## Specialist Health Visitor Service

A Specialist Health Visitor for Venereal Disease was appointed in November 1971 and attached to the special Clinic at the Leicester Royal Infirmary. Although the emphasis of this work must be on following up defaulters and contact tracing, valuable counselling had been given to the clinic attenders.

## Child Health Clinics

### Attendances by children

|      | Attendances | Sessions |
|------|-------------|----------|
| 1970 | 77811       | 1642     |
| 1971 | 74811       | 1549     |

## Health Education

The main health influences in the lives of us all are derived in childhood from home and family. As we grow older friends at school and at work and the mass media are an important influence. In quantity the health education planned and provided by professional health educators is the least to which the public is exposed. It must, therefore, be the richest in quality. To this end no short cuts have been taken in the thorough preparation of staff for group teaching in schools and in clinics. Full use has been made of our resources. But, as previously, our staff who have learned how to teach have taught for a spell and then we have lost them to marriage or promotion.

The personal one-to-one teaching in homes, clinics and surgeries by doctors, health visitors and school nurses, district nurses and midwives, and also by the public health inspectors in the environmental field, forms the bulk of the health education and is all supported by information and teaching aids from the health education department.

Teaching has been concentrated where we believe it will be most productive; in schools, to expectant parents and in the cytology clinics.

### *Schools*

With the co-operation and interest of Head Teachers and staff, teaching on personal health, child care and community health has been carried out by Health Department staff throughout the year in the majority of the secondary modern schools in the city. This has augmented the teaching by school staff throughout the curriculum and that done by doctors and nurses when they see the boys and girls individually in schools.

Teaching is mainly to the fourth year pupils. Courses vary in length from a whole year to a few weeks. Repeated visits to some schools are needed during the week to cover all the classes.

Special efforts this year have been made in class teach-

ing to inform and influence children on such social problems as smoking, the sexually transmitted diseases and the misuse of drugs.

Health teaching is done in special schools and an increasing (but limited) amount in the grammar schools.

### *Antenatal classes*

The teaching of expectant mothers is given high priority in the health education programme. Specially trained midwives and health visitors teach mothercraft and the physical and psychological preparation for labour. Our aim is that mothers shall be well informed and confident; that labour will be shorter and easier because of the instruction; that the mother shall carry the confidence forward into the initial care of her baby. Family planning advice is incorporated. About 400 mothers attended classes.

### *Adopting parents*

Three courses only were necessary during the year. Fewer babies are available for adopting. The classes were designed to give the parents help and confidence in the initial care of their babies.

### *Cytology clinics*

The teaching that could lead to early detection of breast cancer has continued. Nearly all women who attend at the Health Department for the cervical smear test are instructed, by means of a one minute film, on regular self-examination of the breasts. About 1,040 women were thus instructed this year. Facilities have been provided for the instruction of women at two large organisations in the city. Many leaflets have been distributed.

### *Child health centres*

Here the teaching is all at the moment on a personal one-to-one basis. Health visitors, in their role as health educators, counsel and guide the mothers. Young mothers

now coming to antenatal classes and to child centres are often the ones who have had mothercraft in schools.

#### *Family planning*

More and more teaching has been done on this subject and Head Teachers have given us the opportunity to include it in our school courses. Evidence is available that pregnancy in teenage (with or without marriage) puts the young mother at a greater risk physically, emotionally and socially than her older counterpart and that the welfare of her baby will also be in danger.

#### *Smoking and health, sexually transmitted disease, misuse of drugs*

Efforts have been made to influence and inform children and the public on these matters. All requests for information and reading material were met. Lectures, films and discussions have been given in places of work, in a working men's club, to women's organisations and in Colleges of Further Education. Some hundreds of teachers attended two conferences on the sexually transmitted diseases.

#### *Miscellaneous health education*

Nearly 400 requests were received for information and teaching material. Full use has been made of opportunities for teaching by leaflets and posters. Participation has continued in the training programmes of student teachers, student hospital nurses, student health visitors and district nurses, pupil midwives, home help trainees and youth leaders. All requests for talks to outside organisations have been met.

#### *Asian community*

We now have a wide range of leaflets in the Asian languages. They have been requested for distribution nationally. Advice and teaching material have been given to many factories and other places of work concerning the health and hygiene of Asian girls.

**Health Visiting**

|   | 1971         |             | 1970         |             |
|---|--------------|-------------|--------------|-------------|
|   | H/V's        | CN/A's      | H/V's        | CN/A's      |
| Number of first visits to children born 1971                                  | 4710         | .           | 5020         | .           |
| Number of re-visits to children born 1971                                     | 11541        | 66          | 10713        | 85          |
| Number of visits to children born 1967/70                                     | 37627        | 272         | 36674        | 493         |
| Number of first visits to ante-natal cases                                    | 625          | .           | 636          | .           |
| Number of other visits to ante-natal cases                                    | 462          | 2           | 415          | .           |
| Number of visits to tuberculosis patients                                     | 1244         | 437         | 1327         | 718         |
| Number of visits re tuberculin test reading and B C G follow up               | 10           | 49          | 14           | 43          |
| Number of visits concerning Infant deaths                                     | 27           | .           | 55           | .           |
| Number of visits concerning after-care  | 724          | 56          | 780          | 38          |
| Number of visits to diabetic patients   | 3247         | .           | 2252         | .           |
| Number of visits concerning applications for convalescent home accommodations | 123          | 5           | 231          | 27          |
| Number of visits concerning infectious diseases                               | 52           | 11          | 89           | 51          |
| Number of visits concerning problem families                                  | 1674         | 1           | 1589         | 11          |
| Number of visits concerning re-housing  | 168          | .           | 274          | .           |
| Number of other visits (*see separate list)                                   | 5476         | 1475        | 5540         | 1413        |
| Number of no access visits  | 16455        | 1458        | 15153        | 1416        |
| Number of visits to persons over 65 yrs                                       | 4100         | 964         | 2696         | 1686        |
| Number of visits re chiropody (excluding age 65 and over)                     | 18           | 2           | 26           | 42          |
| <b>Totals</b>   | <b>88283</b> | <b>4798</b> | <b>83484</b> | <b>6023</b> |

**\*Number of other visits:**

|  |             |             |             |             |
|--|-------------|-------------|-------------|-------------|
| Visits to Child minders                  | 604         | .           | 1976        | 6           |
| Visits to mentally disordered persons    | 1198        | .           | 990         | 7           |
| Visits to other discharges from hospital | 78          | 4           | 60          | .           |
| Other visits                             | 3596        | 1471        | 2514        | 1400        |
| <b>Totals</b>                            | <b>5476</b> | <b>1475</b> | <b>5540</b> | <b>1413</b> |

**Attendances at clinics and other sessions**

|  | 1971                |                                      | 1970                                 |                    |
|--|---------------------|--------------------------------------|--------------------------------------|--------------------|
|  | H/V's               | CN/A's                               | H/V's                                | CN/A's             |
| Child Health Clinics                       | 2445 $\frac{1}{2}$  | 3188                                 | 2706                                 | 3333               |
| Ante-Natal Clinics                         | .                   | 39 $\frac{1}{2}$                     | .                                    | 44                 |
| Development Clinics                        | 65                  | .                                    | 86                                   | .                  |
| Mothercraft and Health Education (Schools) | 133 $\frac{1}{2}$   | 182                                  | 128 $\frac{1}{2}$                    | 60                 |
| All sessions in school (not incl. above)   | 138                 | 5601                                 | 316 $\frac{3}{4}$                    | 4315 $\frac{1}{2}$ |
| Immunisation and Vaccination clinics       | 130 $\frac{1}{2}$   | 333 $\frac{1}{2}$                    | 49                                   | 135                |
| Screening Tests and Audiology clinics      | 203 $\frac{3}{4}$   | 319                                  | 295 $\frac{1}{4}$                    | 391                |
| Hospital sessions                          | 619                 | 11                                   | 703 $\frac{3}{4}$                    | 1                  |
| Parentcraft sessions                       | 125                 | 21                                   | 153                                  | 62 $\frac{1}{2}$   |
| Any other clinics                          | 121                 | 3195 $\frac{1}{2}$                   | 194 $\frac{3}{4}$                    | 2347               |
| Clerical sessions                          | 2447 $\frac{1}{4}$  | 445                                  | 2823 $\frac{1}{4}$                   | 710 $\frac{1}{2}$  |
| All other sessions                         | 13216 $\frac{1}{2}$ | 3926                                 | 13519 $\frac{1}{2}$                  | 3359               |
| <b>Totals</b>                              | <b>19645</b>        | <b>17261<math>\frac{1}{2}</math></b> | <b>20975<math>\frac{3}{4}</math></b> | <b>14579</b>       |

## Summary of Nursing Statistics

TABLE A

|   | 1971  | 1970  | Differences from<br>1970 |         |
|---|-------|-------|--------------------------|---------|
| Number of Cases treated at home by day              | 6765  | 6532  | + 233                    | + 3.6%  |
| Number included above who are also treated by night | 208   | 275   | - 67                     | - 2.4%  |
| Number treated at Centre                            | 416   | 418   | - 2                      | - 0.0%  |
| Number treated at G.P. Surgery                      | 12997 | 9359  | + 3638                   | + 38.9% |
| Total Cases treated                                 | 20178 | 16309 | + 3869                   | + 23.7% |

## Visits and Treatments Undertaken

TABLE B

|                                       |        |        |        |         |
|---------------------------------------|--------|--------|--------|---------|
| Number of domiciliary visits by day   | 168220 | 161559 | + 6488 | + 3.9%  |
| Number of treatments at Centre        | 5062   | 5235   | - 173  | - 3.3%  |
| Number of domiciliary visits by night | 8476   | 8671   | - 195  | - 2.3%  |
| Number of treatments at G.P. Surgery  | 22300  | 18621  | + 3679 | + 19.8% |
| Total                                 | 204058 | 194086 | + 9972 | + 5.14% |

## Visits according to Nursing Centre

Table C

|                                | 1971  | 1970  | 1969  | 1968  | 1967  |        |         |
|--------------------------------|-------|-------|-------|-------|-------|--------|---------|
| Central                        | 51704 | 42699 | 47269 | 52138 | 51236 | + 9005 | + 21.0% |
| Belgrave                       | 53126 | 53041 | 48221 | 47755 | 45071 | + 85   | + 0.1%  |
| West End                       | 68452 | 71054 | 66515 | 70447 | 69647 | - 2602 | - 3.1%  |
| Night Visits included in above | 8476  | 8671  | 8674  | 8969  | 8426  | - 195  | - 2.2%  |

## Age Distribution of Cases at all Centres

Table D

|                   |          | Under<br>1 year |      |       |       |     |      | All ages | Total |
|-------------------|----------|-----------------|------|-------|-------|-----|------|----------|-------|
|                   |          | 1-4             | 5-14 | 15-64 | 65-74 | 75+ |      |          |       |
| Treated at Centre | <i>m</i> | 1               | 5    | 18    | 178   | 19  | 6    | 227      | 416   |
|                   | <i>f</i> | 1               | 7    | 9     | 139   | 26  | 7    | 189      |       |
| Nursed by day     | <i>m</i> | 57              | 180  | 258   | 907   | 611 | 652  | 2665     | 6765  |
|                   | <i>f</i> | 22              | 70   | 85    | 1392  | 906 | 1625 | 4100     |       |
| Nursed at night   | <i>m</i> | .               | .    | .     | 28    | 24  | 36   | 88       | 208   |
|                   | <i>f</i> | .               | 1    | 2     | 33    | 30  | 54   | 120      |       |
| G.P. Surgeries    |          |                 |      |       |       |     |      |          | 12997 |

### Age distribution of Cases

| Table E  |                          | Under 1 year | 1-4 | 5-14 | 15-64 | 65-74 | 75+ | Total |
|----------|--------------------------|--------------|-----|------|-------|-------|-----|-------|
| Belgrave | Treated at home by day   | 25           | 89  | 118  | 734   | 425   | 715 | 2106  |
|          | Treated at home by night | .            | 1   | 1    | 16    | 11    | 15  | 44    |
|          | Centre                   | .            | 4   | 15   | 95    | 18    | 1   | 133   |
| Central  | Treated at home by day   | 23           | 61  | 81   | 668   | 465   | 768 | 2066  |
|          | Treated at home by night | .            | .   | 1    | 21    | 17    | 44  | 83    |
|          | Centre                   | 2            | 8   | 12   | 222   | 27    | 12  | 283   |
| West End | Treated at home by day   | 31           | 100 | 144  | 897   | 627   | 794 | 2593  |
|          | Treated at home by night | .            | .   | .    | 24    | 26    | 31  | 81    |
|          | Centre                   | .            | .   | .    | .     | .     | .   | .     |

### Number of Patients treated at Home, by duration of treatment

| Table F |          |              | Under 2 wks | 2 wks-1 mth | 1-3 mths | Over 3 mths |      |      |
|---------|----------|--------------|-------------|-------------|----------|-------------|------|------|
|         |          |              | 1971        | 1970        | 1971     | 1970        | 1971 | 1970 |
|         | Under 65 | <i>m</i>     | 881         |             | 294      |             | 226  |      |
|         | 65-74    |              | 215         |             | 104      |             | 111  |      |
|         | 75+      |              | 203         |             | 95       |             | 117  |      |
|         |          | Totals       | 1299        | 1325        | 493      | 492         | 454  | 426  |
|         |          |              |             |             |          |             | 646  | 581  |
|         | Under 65 | <i>f</i>     | 807         |             | 329      |             | 275  |      |
|         | 65-74    |              | 206         |             | 118      |             | 191  |      |
|         | 75+      |              | 354         |             | 226      |             | 270  |      |
|         |          | Totals       | 1367        | 1408        | 673      | 644         | 736  | 639  |
|         |          |              |             |             |          |             | 1513 | 1435 |
|         |          | Grand Totals | 2666        | 2733        | 1166     | 1136        | 1190 | 1065 |
|         |          |              |             |             |          |             | 2159 | 2016 |

### Patients aged 65 and over

| Table G |                                   | 1971   | 1970   | 1969   | 1968   | 1967   |
|---------|-----------------------------------|--------|--------|--------|--------|--------|
|         | Number of male patients over 65   | 1288   | 1257   | 1031   | 1175   | 993    |
|         | Number of female patients over 65 | 2564   | 2497   | 2238   | 2088   | 2070   |
|         | Total                             | 3852   | 3754   | 3269   | 3263   | 3063   |
|         | Number of visits                  | 120113 | 117440 | 114603 | 116787 | 114973 |

| Table H |  |                        | 65-74    | 75+   |
|---------|--|------------------------|----------|-------|
|         |  | Number of patients     | <i>m</i> | 630   |
|         |  |                        | <i>f</i> | 932   |
|         |  | Number of day visits   |          | 44681 |
|         |  | Number of night visits |          | 1358  |
|         |  |                        |          | 1632  |
|         |  |                        |          | 72120 |
|         |  |                        |          | 1954  |

**Distribution by Disease (Main diseases nursed)**
**Table I**

|                                       | Male Total | —65    | 65-74 | 75+    | Died | Visits | Female Total | —65 | 65-74 | 75+ | Died | Visits |
|---------------------------------------|------------|--------|-------|--------|------|--------|--------------|-----|-------|-----|------|--------|
| Cancer                                | 242        | 82     | 96    | 64     | 138  | 7686   | 256          | 100 | 82    | 74  | 96   | 9034   |
| Other Tumours                         | 55         | 44     | 9     | 2      | .    | 429    | 151          | 129 | 16    | 6   | 2    | 1022   |
| Tuberculosis                          | 56         | 50     | 4     | 2      | .    | 1963   | 68           | 67  | 1     | .   | .    | 2324   |
| Bronchitis/other respiratory diseases | 216        | 115    | 55    | 46     | 24   | 4516   | 209          | 93  | 42    | 74  | 18   | 3410   |
| Diabetes                              | 67         | 31     | 18    | 18     | 6    | 4397   | 81           | 30  | 20    | 31  | 4    | 13378  |
| Anaemia                               | 156        | 47     | 55    | 54     | 9    | 2284   | 474          | 172 | 124   | 178 | 12   | 9262   |
| Cardiac                               | 146        | 27     | 41    | 78     | 43   | 3870   | 228          | 31  | 50    | 147 | 47   | 7277   |
| Digestive inc. Hernia                 | 483        | 389    | 57    | 37     | 3    | 4514   | 363          | 205 | 50    | 108 | 9    | 4291   |
| Cerebrovascular                       | 275        | 67     | 111   | 97     | 68   | 12919  | 367          | 61  | 121   | 185 | 75   | 16300  |
| Arthritis + Rheumatism                | 46         | 10     | 16    | 20     | 7    | 1150   | 290          | 73  | 90    | 127 | 15   | 12646  |
| Generative organs, inc. circumcision  | 335        | 259    | 40    | 36     | 6    | 2814   | 316          | 131 | 67    | 118 | 11   | 2580   |
| Diseases of Ear and Eye               | 42         | 26     | 5     | 11     | 2    | 318    | 38           | 15  | 3     | 20  | 2    | 1644   |
| Senility                              | 71         | 1      | 10    | 60     | 22   | 2207   | 188          | 2   | 20    | 166 | 26   | 6716   |
| Skin disease and cellular tissues     | 243        | 150    | 42    | 51     | 6    | 5691   | 387          | 167 | 83    | 137 | 8    | 11631  |
| Total                                 |            |        |       |        |      | 54758  | Total        |     |       |     |      |        |
| Others                                | 459        | Male   |       | Visits |      | 7518   |              |     |       |     |      |        |
|                                       | 873        | Female |       | Visits |      | 17967  |              |     |       |     |      |        |

**Home Circumstances of Patients**
**Table J**

|              | —65      |          | 65—74    |          | 75+      |          |
|--------------|----------|----------|----------|----------|----------|----------|
|              | <i>m</i> | <i>f</i> | <i>m</i> | <i>f</i> | <i>m</i> | <i>f</i> |
| Living alone | 12       | 37       | 28       | 99       | 38       | 203      |
| Housebound   | 444      | 543      | 267      | 457      | 341      | 902      |
| Bedbound     | 136      | 143      | 155      | .        | 146      | 178      |
|              |          |          |          |          |          | 373      |

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**Registration of Nursing Homes**

|                                     | 1971            |           |        | Number of beds provided |
|-------------------------------------|-----------------|-----------|--------|-------------------------|
|                                     | Number of Homes | Maternity | Others |                         |
| Homes registered during year        | -               | -         | -      | -                       |
| Registrations withdrawn during year | -               | -         | -      | -                       |
| Homes on register at end of year    | 10              | 18        | 256    | 274                     |
|                                     | No. of beds     |           |        |                         |
| Ava Nursing Home                    |                 |           |        | 18                      |
| Central Nursing Home                |                 |           |        | 16                      |
| Dane Hills Convent                  |                 |           |        | 48                      |
| Fernleigh Nursing Home              |                 |           |        | 38                      |
| Leicester Clinic                    |                 |           |        | 32                      |
| St. Francis Private Nursing Home    |                 |           |        | 24 + 18 Maternity       |
| St. Benet's Nursing Home            |                 |           |        | 21                      |
| Sundial Nursing Home                |                 |           |        | 22                      |
| The Lawn Nursing Home               |                 |           |        | 25                      |
| University Medical Centre           |                 |           |        | 12                      |

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**Registration of Nursing Agencies**

|   |     |
|---|-----|
| Agencies registered during the year     | Nil |
| Agencies on register at the end of year | 3   |

## **Domestic Renal Haemodialysis for End Stage Chronic Kidney Disease**

In August 1971 the second patient in Leicester was provided with facilities for home dialysis.

It has been accepted that this local authority will make structural provision under section 12 of the Health Services and Public Health Act 1968 to accommodate home dialysis equipment.

The arrangements for the installation of a kidney machine are co-ordinated by a Nursing Officer and a Public Health Inspector in consultation with the Hospital Renal Unit.

A Health Visitor maintains regular contact with the patient to give social support and provide liaison links with the General Practitioner and the Hospital Renal Unit who are responsible for the dialysis procedure.

Various possibilities for housing a home kidney unit were investigated and it was decided that a portable relocatable building, sited at the rear of the house would provide the most satisfactory environment for the patient who is dependant on an artificial kidney machine.

The advantages of a portable unit are:

- 1 The entire unit and its internal services are portable and relocatable.
- 2 In many instances this unit will provide more space.
- 3 It lends itself to the ideal lay-out and better clinical conditions.
- 4 The unit remains the property of the Local Authority. If the patient discontinues treatment (e.g. through transplantation of Kidney), it can easily be separated from the external services and transported to another address.
- 5 There is less interruption to the routine of the home and so less harmful stress to the patient and his family.
- 6 If properly sited there is a more pleasant environment for the patient who has to spend 40—45 hours per week in the dialysis room.

Regular dialysis treatment is often given overnight—so

that the patient can work during the day—preferably carried out in three ten-hour sessions per week.

This is a highly successful form of treatment and the number of patients selected for dialysis therapy is likely to increase due to:

- 1 An improved survival rate.
- 2 A more flexible selection policy.
- 3 The use of dialysis to complement kidney transplantation.
- 4 The availability of hospital training and supporting beds.

Leicester will have a ten-bedded renal unit at the Leicester General Hospital in operation in 1974.



*Renal Dialysis*



*Renal Dialysis*

## Domiciliary care of paraplegics

In July 1971 a survey was carried out of the paraplegic patients receiving domiciliary nursing care in the County Borough. The findings of this survey as well as being of interest from a medical point of view also reflect the substantial nursing and social problems that arise amongst the patients and their families.

### Age and sex distribution

|        | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65+ |
|--------|----|----|----|----|----|----|----|----|-----|
| Male   | 2  | 1  | 2  | 1  | .  | .  | 1  | 2  | 1   |
| Female | .  | .  | .  | .  | 1  | 2  | 1  | .  | .   |

### Aetiology

|                     |    |
|---------------------|----|
| Polio               | 2  |
| R.T.A.              | 3  |
| Industrial accident | 1  |
| Virus infection     | 1  |
| Cancer              | 2  |
| Multiple sclerosis  | 5  |
|                     | 14 |

### Visits

| No. of patients        | Frequency of visits | Total visits per week |
|------------------------|---------------------|-----------------------|
| 2                      | 2 x daily           | 28                    |
| 7                      | Daily               | 7                     |
| 1                      | 4 x week            | 4                     |
| 2                      | 3 x week            | 6                     |
| 1                      | 2 x week            | 2                     |
| 1                      | Weekly              | 1                     |
| excluding night visits |                     | 48                    |

### Period over which nursed

| Months | Years |    |    |    |     |     |
|--------|-------|----|----|----|-----|-----|
| -6     | -18   | -2 | -5 | -7 | -10 | -20 |
| 2      | 3     | 2  | 2  | 3  | 1   | 1   |

### Special equipment

|             |    |
|-------------|----|
| Wheelchairs | 14 |
| Hoists      | 6  |
| Ripple beds | 3  |

### Comments

These patients require extensive care provided both by relatives and the Nursing Services. There is the constant threat of breakdown of the skin surfaces and respiratory or urinary infection. At the time of writing this report (February 1972—during the Coal Strike) other risks in connection with these patients are predominant, for they are particularly susceptible to hypothermia and yet because of their lack of feeling in their limbs are unable to give warning of the symptoms. Similarly, because of the failure of the power supply it has been impossible to maintain the constant functioning of ripple beds. (In addition to the paraplegics there are at least 40 other patients using ripple beds in the City who are similarly affected).

Each patient requires skilled nursing care and in the majority of cases each visit of necessity is of long duration. Care of the chronic sick, particularly the young chronic sick is gradually becoming recognised as one of the neglected areas. If these patients do survive it is of the utmost importance to ensure that the quality of life that they can maintain is tolerable. They may be handicapped but they should not be discarded.

As can be seen from the Tables some patients survive for a very long time and this inevitably necessitates social and psychological support for the families as well as the patient. In addition to the problem of constant laundering and the necessity to endeavour to maintain morale, the families are often faced with substantial financial difficulties.

## **Training School Report** **District Nurse Training School**

### *State Registered Nurses Course in preparation for the National Certificate of District Nursing*

Five students commenced training in September 1970, in preparation for the examination held in January 1971. All the nurses were successful.

Five students commenced training in January 1971 in preparation for the examination held in May 1971. All the nurses were successful.

Eight students commenced training in September 1971 in preparation for the examination to be held in January 1972.

Students were seconded by this Authority, Northampton County Borough and Warwickshire County Council.

### *State Enrolled Nurse's Course in preparation for the National Certificate of District Nursing (SEN)*

Four nurses successfully completed the course in May 1971.

Four nurses commenced training in November 1971 in preparation for the examination to be held in January 1972.

### *Leicester Royal Infirmary Integrated Course for Pupil Nurses*

29 pupils spent 2 days on the district during Introductory Blocks.

28 pupils spent 2 weeks on the district at the end of the first year of training.

Eight pupils completed 6 weeks District Nurse Training and seven were successful in the National Examination for District Nurse Training (S.E.N.) held in May 1971.

### *In-Service Training*

A Clinical refresher course was commenced in October and completed in March 1971. Lectures covered a number of specialities and the attendance at each session remained fairly constant at 100. The staff benefited from the opportu-

nity to meet and exchange ideas with colleagues in medical, nursing and allied professions. The total hours of the course was the equivalent of a 2 weeks refresher course.

### *Course for District Nurse Practical Instructors*

This was the second 6 day course organised by this authority to help district nursing sisters in their ever increasing role as practical work instructors. It was apparent by the response to the course advertisements that there is a tremendous need for help and guidance for nurses who undertake practical teaching duties in the field.

Number of places limited to 25.

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### **Seconding authorities**

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|  | <b>This Authority</b> | <b>11</b> |
|--|-----------------------|-----------|
| Cambridge & Isle of Ely County Council |                       | 1         |
| Doncaster County Borough               |                       | 2         |
| Derby County Borough                   |                       | 2         |
| Leicestershire County Council          |                       | 6         |
| Northamptonshire County Council        |                       | 2         |

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### *Course for Nursing Auxiliaries*

10 Nursing Auxiliaries attended a one week course in June 1971. A follow up study day was arranged in September.

### *Visitors to the Unit*

Miss Stoba, Health Visitor Tutor Student, Bolton, for teaching practice.

Miss Coe, Clinical Teachers Course, Birmingham—observation of district nurse training and field work.

### *District Nurse Training Panel*

Met in January and July, 1971.

Subjects under discussion and review:

"Community Care Option" G.N.C. 1969 revised  
Syllabus of training.

General Practice Placements for S.R.N. student district nurses.

National Examination for District Nurse Training—S.R.N. and S.E.N. Group School project.

*New Developments*

Classroom, library and dining room facilities were now provided at the Leicester Royal Infirmary School of Nursing, for State Registered, and State Enrolled District Nurse Students.

Discussion on the Group School Project to be housed at Brookfield has taken place between:

- 1 Representatives from the Regional Hospital Board
- 2 Leicester No. 1 Hospital Management Committee
- 3 Principal Tutors of the Leicester Royal Infirmary and Leicester General Hospital Schools of Nursing
- 4 Medical Officers of Health for Leicester City and Leicestershire
- 5 Public Health Tutor, Leicester City and Nursing Officer, Leicestershire.

### **Compulsory removal**

Court orders under Section 47 of the National Assistance Act were required for three people, two aged men whose physical and mental condition made it impossible for them to be nursed in their home and who refused care elsewhere. One of these subsequently improved with proper attention and was later able to return home. One younger man suffering from grave terminal illness also required removal to hospital.

### Chiropody Service

The scheme is provided for pensioners and certain handicapped persons through local chiropodists. An assessment is made in each case to determine need.

The number of treatments given continued to rise in 1971 and the number of patients on the books at 31st December rose from 2,078 in 1970 to 2,664 in 1971.

1971 1970 1969 1968

|                        |      |      |      |      |
|------------------------|------|------|------|------|
| New cases, domiciliary | 260  | 247  | 263  | 294  |
| Domiciliary treatments | 6591 | 6176 | 6040 | 5281 |
| New cases, other       | 299  | 275  | 254  | 268  |
| Other treatments       | 6652 | 5823 | 5561 | 4944 |

### Laundry Service

Following discussions with the W.R.V.S. it was agreed that the Health Department would be responsible for the administration and provision of the Laundry Service with effect from 21st June, 1971. It is anticipated that because of greater life expectancy and failing health in old age, that increasing demands will be made upon this most reliable service.

The provision of the Laundry Service and the co-operation of the W.R.V.S. during the change-over period is greatly appreciated.

### Domiciliary Laundry Service

1971 1970

|                                 |     |     |
|---------------------------------|-----|-----|
| Number of cases brought forward | 86  | 109 |
| New cases                       | 222 | 309 |

### Cases removed from register

Died 90 154

|                            |    |    |
|----------------------------|----|----|
| Transferred to Hospital    | 55 | 72 |
| Service no longer required | 23 | 64 |

### Dressings Disposal Service

1971

|                                 |    |
|---------------------------------|----|
| Number of cases brought forward | 56 |
| New cases                       | 79 |

### Cases removed from register

Died 26

|                            |    |
|----------------------------|----|
| Transferred to Hospital    | 14 |
| Service no longer required | 11 |

### Medical Equipment Loan

The responsibility for organising and maintaining the loan of medical equipment is delegated to the British Red Cross Society, Mrs Ann Crumbie, Assistant Branch Director, Medical Loan Section, reports as follows.

"At the beginning of the year the Medical Loan Section moved into new Headquarters at 157-159 Cavendish Road.

The extra space available has made it possible to cope with the large increase in work which developed during the year. The Centre is on three bus routes and much more accessible to the more highly densely populated areas.

The permanent display and training unit, one of the features of the new Headquarters, has greatly helped our work with the District Nurses. Demonstrations of the use of hydraulic hoists and the opportunity to show nursing aids has been greatly facilitated. We suspect that the Group Attachments of the District Nurses is helping the General Practitioners to realise the scope of our work and that this is one of the contributory factors of the increase.

We are most grateful for the close co-operation which exists between the Department and all the staff at the Health Department.

### Total Issues to both City & County

|  | 1966  | 1967   | 1968   | 1969   | 1970   | 1971   |
|--|-------|--------|--------|--------|--------|--------|
|  | 9,619 | 10,623 | 11,691 | 13,663 | 16,398 | 20,005 |

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# City Ambulance Service

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Report for the year 1971

*J. McCafferty, AIAO, Chief Ambulance Officer*

### Calls

During the year 1971, Ambulance vehicles travelled 461,864 miles and carried 130,076 patients. There was an overall increase of 2,932 patients conveyed and of these 2,228 were walking cases. The mileage was reduced by 3,134 miles, and the miles per patient by 0.11 from 3.66 to 3.55 miles. The reduction was effected by introducing fixed zones for collecting patients for Leicester General Hospital, The Towers Hospital and Carlton Hayes Hospital. This pattern of one vehicle going into a fixed area and collecting the same number of patients daily, not only saved mileage but also the controller's time as master sheets were prepared to cover the whole week.

### New appointment

A post of Hospital Liaison Officer was created in 1971 to be responsible for co-ordinating ambulance requests for both the City and the County Ambulance Services and it is hoped that with a full-time Ambulance Officer in post at the Infirmary that eventually the number of abortive journeys will be reduced. One of his main tasks is to ensure that all departments are aware of the need for special vehicles to be operating from the hospitals for the sole purpose of taking out-patients home.

### New Vehicles

The replacement vehicles mentioned in the 1970 report arrived in February, 1971 and were well received by the staff. A notable feature was the automatic drive, soft suspension and very low loading. The present strength of the service is:

|                           |    |
|---------------------------|----|
| Ambulances                | 17 |
| Dual purpose vehicles     | 4  |
| Sitting case vehicles     | 4  |
| Estate car                | 1  |
| Staff/sitting car         | 1  |
| Van                       | 1  |
| Workshop recovery vehicle | 1  |

### Radio Telephone Communication

With the Minister of Post and Telecommunications and the Department of Health and Social Security agreeing on a new wave band, specifications were drawn up for the replacement of the present Ambulance Service equipment. This work will be carried out in the Spring of 1972, and a detailed report will be included in the 1972 annual report.

### Training

In April 1971, 2 pilot courses of 12 students were held in our own training school. The course consisted of basic first aid subjects presented in seven sessions.

The response to this type of course was so great that training continued until the end of May when 192 representatives from every department in the Corporation had attended. In all 300 applications were received, and it is hoped that this type of course will be repeated annually.

### Training Equipment

The Shepshed Methodist Youth Club organised a sponsored adventure walk to raise money for a mobile cardiac unit which was planned for 1971. Unfortunately the project was postponed so the money was used to buy equipment for our training school. The items chosen were, a combined mouth to mouth cardiac massage model and an overhead projector which will be in constant use.

### Examinations

Mr. J. McCafferty, Chief Ambulance Officer, passed his Associate Examinations with distinction and was awarded the Institute prize for being the top student for 1971.

### Competition

The annual competition at the depot was won by Ambulancemen Wright and Musson. Although they were unsuccessful in the regional round held at Bridlington, Ambulanceman Wright tied for first place for the title of Driver of the Year. In a special driving test set on the day he lost by  $\frac{1}{4}$  of a point.

| <b>City Ambulance Service</b>   |   | <b>Total calls</b> | <b>Increase</b> | <b>Decrease</b> |             |             |             |
|---|---|--------------------|-----------------|-----------------|-------------|-------------|-------------|
|   | <b>Patients carried</b>                     | <b>1971</b>        | <b>1970</b>     |                 |             |             |             |
| Hospitals: Outpatients  | 97882                                       | 91521              | + 6361          |                 |             |             |             |
| Admissions & Transfers  | 8937  | 7572               | + 1365          |                 |             |             |             |
| Discharges & Convalescent   | 6893  | 9110               |                 | - 2217          |             |             |             |
| Maternity cases   | 2248  | 2411               |                 | - 163           |             |             |             |
| Mental cases  | 376   | 203                | + 173           |                 |             |             |             |
| Infectious disease cases  | 61  | 83                 |                 | - 22            |             |             |             |
| Accidents – Road  | 1351  | 1381               |                 | - 30            |             |             |             |
| Other   | 6267  | 6284               |                 | - 17            |             |             |             |
| Premature baby cot cases  | 51  | 38                 | + 13            |                 |             |             |             |
| Parkfield School  | .   | 3191               |                 | - 3191          |             |             |             |
| Other local authorities   | 3   | 3                  |                 |                 |             |             |             |
| Patients dead on arrival  | 132   | 116                | + 16            |                 |             |             |             |
| Abortive  | 4005  | 3797               | + 208           |                 |             |             |             |
| Miscellaneous services for which charges are made –<br>number of journeys     | 1141  | 581                | + 560           |                 |             |             |             |
| Transporting Gas & Air machines for Midwifery Service –<br>number of journeys | .   | 3                  |                 | - 3             |             |             |             |
| Number of other journeys made by personnel                                    | 829   | 850                |                 | - 21            |             |             |             |
|   | <b>Total calls</b>                          | <b>130076</b>      | <b>127144</b>   |                 |             |             |             |
|   | <b>Mileage</b>                              | <b>461864</b>      | <b>464998</b>   |                 |             |             |             |
|   | <b>Average miles per patient</b>            | <b>3.55</b>        | <b>3.66</b>     |                 |             |             |             |
|   | <b>Number of patients conveyed by train</b> | <b>87</b>          | <b>53</b>       |                 |             |             |             |
|   | <b>Train mileage</b>                        | <b>11237</b>       | <b>7236</b>     |                 |             |             |             |
|   | <b>Average train miles per patient</b>      | <b>129.16</b>      | <b>136.53</b>   |                 |             |             |             |
|   | <b>1971</b>                                 | <b>1970</b>        | <b>1969</b>     | <b>1968</b>     | <b>1967</b> | <b>1966</b> | <b>1948</b> |
| Total number of calls   | 130,076                                     | 127,144            | 121,082         | 115,907         | 117,431     | 115,805     | 36,661      |
| Mileage by road   | 461,864                                     | 464,998            | 468,907         | 467,864         | 454,788     | 446,155     | 196,870     |
| Average miles per patient   | 3.55  | 3.66               | 3.86            | 4.04            | 3.81        | 3.85        | 5.37        |
| Patients conveyed by train  | 87  | 53                 | 48              | 72              | 75          | 134         | .           |
| Number of miles by train  | 11,237                                      | 7,326              | 7,323           | 8,507           | 8,834       | 14,173      | .           |
| Average miles per patient by train  | 129.16                                      | 136.53             | 152.56          | 118.15          | 117.78      | 105.75      | .           |



**Mortality Rates-100,000 population**

|                          |          |    | <b>Age Groups</b> |     |      |      |    |
|--------------------------|----------|----|-------------------|-----|------|------|----|
|                          |          |    | 35                | 45  | 55   | 65   | 75 |
| Cancer – Bronchus        | <i>m</i> | 19 | 64                | 335 | 736  | 422  |    |
|                          | <i>f</i> | .  | 12                | 35  | 76   | 32   |    |
| Cancer – Stomach         | <i>m</i> | 6  | 18                | 109 | 177  | 298  |    |
|                          | <i>f</i> | .  | 12                | 41  | 62   | 127  |    |
| Cancer – Breast          | <i>m</i> | .  | .                 | .   | .    | .    | 25 |
|                          | <i>f</i> | .  | 65                | 93  | 131  | 170  |    |
| Cancer – Uterus          | <i>f</i> | .  | 30                | 29  | 90   | 51   |    |
|                          |          |    |                   |     |      |      |    |
| Ischaemic Heart Disease  | <i>m</i> | 58 | 298               | 622 | 1471 | 3523 |    |
|                          | <i>f</i> | 6  | 24                | 204 | 579  | 2029 |    |
| Cardio Vascular Accident | <i>m</i> | 19 | 41                | 167 | 628  | 2730 |    |
|                          | <i>f</i> | 6  | 12                | 111 | 435  | 2357 |    |
| Bronchitis               | <i>m</i> | 6  | 35                | 148 | 481  | 918  |    |
|                          | <i>f</i> | .  | 12                | 41  | 83   | 159  |    |
| Other Respiratory        | <i>m</i> | .  | 6                 | 13  | 49   | 149  |    |
|                          | <i>f</i> | .  | .                 | 6   | .    | 42   |    |

Examination of the age specific mortality rates shows the high proportion of deaths due to ischaemic heart disease in both sexes. In males the incidence rises five fold between age 35 and 54.

### Age specific death rates

Age specific death rates have been calculated for a number of conditions most likely to cause death. It will be seen that cancer of the lung in males continues to remain high and the rate in males age 65—74 is ten times the equivalent rate in the female population of the same age.

Cancer of the breast – the diagnosis of this condition is relatively easy but most patients do not present until the condition is fairly far advanced and it is noted there is a mounting incidence from the age of 45.

In the case of ischaemic heart disease there is a marked increase from the age of 45 but although diagnostic and treatment facilities have improved considerably over the past years, many cases die before treatment can be undertaken. A report from the British Heart Journal states that of the deaths that occurred within 4 weeks of a heart attack, 75% took place outside hospital, 45% within an hour of the attack, and one quarter of all deaths occurred before the doctor saw the patient. In many respects the younger the patient the worse the prognosis. In patients of 64 years or less most deaths occurred before medical care arrived and of these 57% died within 15 minutes of the heart attack and 70% within one hour.

### Road Traffic Accidents

#### Analysis of Persons killed or injured in Leicester City during 1971

|                                 | Fatal | Serious | Slight |
|---------------------------------|-------|---------|--------|
| Child pedestrian                | 5     | 71      | 218    |
| Pedestrians                     | 12    | 82      | 266    |
| Child Pedal Cyclists            | 1     | 11      | 42     |
| Pedal cyclists                  | .     | 9       | 96     |
| Auto cyclists & Scooterists     | .     | 24      | 96     |
| Motor Cyclists                  | .     | 32      | 111    |
| Drivers                         | 4     | 41      | 271    |
| Pillion passengers              | 1     | 5       | 19     |
| Sidecar passengers              | .     | .       | 3      |
| P.S.V. passengers               | .     | 6       | 64     |
| Other passengers                | 6     | 45      | 276    |
|                                 | 29    | 326     | 1462   |
| Total injury accidents recorded | 1492  |         |        |
| Total casualties                | 1817  |         |        |

The Road Research Laboratory in their report puts the cost of all road traffic accidents in Britain in 1968 as £300 million. Applying the same criteria the cost of road traffic accidents in Leicester amounts to nearly £1 million. This does not take into account the cost of "damage only" accidents or those not reported to the Police.

These estimated costs allocated to the various types of personal injury are set out below:

|                                     | £         |
|-------------------------------------|-----------|
| (1) 29 fatal accidents at £15,790   | = 457,910 |
| (2) 288 serious accidents at £1,100 | = 316,800 |
| (3) 1175 slight accidents at £190   | = 223,250 |
|                                     | <hr/>     |
|                                     | 997,960   |
|                                     | <hr/>     |

How many of these lives could have been saved and accidents avoided by greater consideration by drivers and pedestrians?

### Road Accidents to School Children in Leicester

During the year 1971, there were 88 serious and fatal accidents amongst children age 14 years and under in the City of Leicester.

No significant increase in defects such as poor vision, deafness or epilepsy was found amongst these children compared with others not involved in accidents.

There was a noticeable increase in the occurrence of accidents in the northern section of the City - 49 as opposed to 21 in the central division and 18 in the eastern section. The reason for this discrepancy lies possibly in the geographical siting of estates with a high proportion of child inhabitants in the northern section, and that in each of the areas where a noticeable cluster of victims live, there are two or more major roads bounding the estate.

Analysis of the times and days of the week when accidents occurred showed a definite increase in the number reported on Fridays compared with Monday, Tuesday and Saturday, each of which produced only two thirds while Wednesday, Thursday and Sunday numbers were one third of the Friday total.

The times of the accidents showed a certain tendency to increase between 3.00 p.m. and 7.30 p.m. with the exception of Saturday and Sunday when the incidence was highest between 12 noon and 4.00 p.m.

In a random selection of 37 serious accidents, the distribution between Infant, Junior and Senior schools was roughly equal.

A total of 548 school days was lost through injuries sustained - an average of 21 school days per accident. Only a very small proportion of mothers of the children involved were at some form of work, so that an attempt to cost each accident in terms of time absent from work by the mother, was not considered significant enough to pursue.

| Cervical Cytology 1971                        | 1971  | 1970  | 1969 | 1968 |
|---|-------|-------|------|------|
| No. of women requesting smear                 | 679   | 1117  | 1245 | 1433 |
| Examined at Midland House                     | 1228* | 1231* | 1028 | 1338 |
| Examined at home                              | .     | .     | 1    | 4    |
| No. on waiting list                           | 66    | 88    | 177  | 78   |
| No abnormal cells                             | 1154  | 1197  | 937  | 1135 |
| Doubtful                                      | 2     | 1     | 7    | 4    |
| Positive                                      | 1     | 2     | 4    | 5    |
| Positive findings                             |       |       |      |      |
| per 1000 Examinations                         | 0.8   | 1.6   | 3.7  | 3.7  |
| Trichomonas                                   | 30    | 18    | 37   | 38   |
| Monillia                                      | 14    | 7     | 6    | 8    |
| Other findings                                | 27    | 6     | 37   | 152  |
| Total abnormal findings                       | 72    | 33    | 84   | 203  |
| Total abnormal findings per 1000 Examinations | 5.9   | 2.8   | 8.1  | 15.2 |

\*Examinations higher than requests because of planned recalls

## Infectious Diseases

The incidence of infectious diseases in the city remains at a fairly low level showing little change from 1970. There have been no major outbreaks of any specific diseases and it is gratifying to see a reduction in the number of cases of infective hepatitis.

The increase in whooping cough notifications from 13 to 60 is a reflection of the low figure for acceptance of primary immunisation in infancy.

The four cases of typhoid were all contracted abroad. There have been no generalised outbreaks of food poisoning or dysentery, in fact gastro enteritis cases were reduced from 86 in 1970 to 29 in 1971, let us hope this trend continues.

## Infectious Diseases Morbidity and Mortality

|                       | Notifications<br>1971         | Notifications<br>1970 | Deaths<br>1971 | Deaths<br>1970 |
|-----------------------|-------------------------------|-----------------------|----------------|----------------|
| Measles               | 1722                          | 2476                  | .              | .              |
| Scarlet Fever         | 47                            | 40                    | .              | .              |
| Whooping Cough        | 60                            | 13                    | 1              | .              |
| Diphtheria            | .                             | .                     | .              | .              |
| Meningitis            | 12                            | 10                    | 3              | 5              |
| Acute Poliomyelitis   | .                             | .                     | .              | .              |
| Encephalitis          | .                             | .                     | 1              | .              |
| Bacillary Dysentery   | 31                            | 14                    | .              | .              |
| Typhoid Fever         | 4                             | 1                     | .              | .              |
| Paratyphoid Fever     | .                             | .                     | .              | .              |
| Infective Hepatitis   | 146                           | 561                   | 1              | 2              |
| Ophthalmia Neonatorum | 1                             | 3                     | .              | .              |
| Leprosy               | 1                             | 2                     | .              | .              |
| Gastro Enteritis      | 29                            | 86                    | 5              | 9              |
| Tuberculosis          | (see section on Tuberculosis) |                       |                |                |

## Infectious diseases notifications

|                       | 1950 | 1955 | 1960 | 1965 | 1967 | 1968 | 1969                 | 1970 | 1971 |
|-----------------------|------|------|------|------|------|------|----------------------|------|------|
| Measles               | 1839 | 7168 | 2867 | 2411 | 2142 | 1638 | 1254                 | 2476 | 1722 |
| Whooping Cough        | 969  | 1139 | 61   | 168  | 131  | 140  | 19                   | 13   | 60   |
| Dysentery             | 697  | 505  | 48   | 169  | 27   | 116  | 35                   | 14   | 31   |
| Scarlet Fever         | 478  | 147  | 99   | 66   | 122  | 118  | 89                   | 40   | 47   |
| Puerperal Fever       | 47   | 155  | 92   | 15   | 17   | 14   | No longer notifiable |      |      |
| Diphtheria            | 5    | .    | .    | .    | .    | .    | .                    | .    | .    |
| Meningitis            | .    | .    | .    | .    | .    | .    | .                    | .    | .    |
| Meningococcal         | 16   | 7    | .    | 2    | 2    | 1    | 2                    | 7    | 6    |
| Other Specified       | .    | .    | .    | .    | .    | .    | 11                   | 2    | 6    |
| Unspecified           | .    | .    | .    | .    | .    | 1    | 7                    | 1    | .    |
| Poliomyelitis         | .    | .    | .    | .    | .    | .    | .                    | .    | .    |
| Paralytic             | 42   | 4    | 1    | .    | .    | .    | .                    | .    | .    |
| Non-Paralytic         | 37   | 9    | .    | .    | .    | .    | .                    | .    | .    |
| Encephalitis          | .    | .    | .    | .    | .    | .    | .                    | .    | .    |
| Infectious            | 8    | .    | 5    | .    | .    | 1    | 1                    | .    | .    |
| Post-Infectious       | .    | 1    | .    | 1    | 1    | .    | .                    | .    | .    |
| Leptospirosis         | .    | .    | .    | .    | .    | .    | .                    | .    | .    |
| Paratyphoid           | .    | .    | 1    | .    | .    | 1    | .                    | .    | .    |
| Typhoid               | .    | .    | .    | .    | 1    | .    | 3                    | 1    | 4    |
| Gastro Enteritis      | .    | .    | .    | .    | .    | .    | 57                   | 86   | 29   |
| Food Poisoning        | 347  | 251  | 27   | 5    | 19   | 76   | 51                   | 60   | 71   |
| Malaria               | .    | 2    | .    | .    | .    | 1    | 1                    | 2    | .    |
| Ophthalmia Neonatorum | 2    | 3    | 11   | 6    | 7    | 1    | 3                    | 3    | 1    |
| Leprosy               | .    | .    | .    | .    | .    | .    | 1                    | 2    | 1    |
| Infective Hepatitis   | .    | .    | .    | 299  | 188  | 244  | 664                  | 561  | 146  |
| Tuberculosis          | .    | .    | .    | .    | .    | .    | .                    | .    | .    |
| Pulmonary             | .    | 213  | 158  | 124  | 83   | 94   | 108                  | 128  | 122  |
| Non-Pulmonary         | .    | 26   | 26   | 33   | 38   | 37   | 73                   | 62   | 64   |

### ***Poisoning Admissions***

Every week at least 6 children are admitted to Leicester Royal Infirmary suffering from poisoning. During the summer months, however, this figure trebles.

Some children are admitted on more than one occasion suffering from poisoning and it is by no means rare for poisoning to occur to consecutive children in a family over a period of a number of years. When will parents and others responsible for the care of children learn that the child is naturally inquisitive, is probably incapable of reading, and therefore does not appreciate that household cleaning materials, pills and other items swallowed may be dangerous.

Even though death may not result immediately, in a number of instances permanent damage may result from the ingestion of poisonous substances. The following list of poisonous materials consumed by children indicates the necessity to improve the present methods of security.

#### **Household Chemicals**

- paraffin
- toilet cleaner
- nail varnish remover
- turpentine
- hair spray
- Brasso
- bleach
- windowlene
- eau-de-cologne
- caustic soda
- anti freeze
- 'seven in one' oil

#### **Plants**

- laburnum seeds
- toadstools
- lupin seeds
- lilac seeds

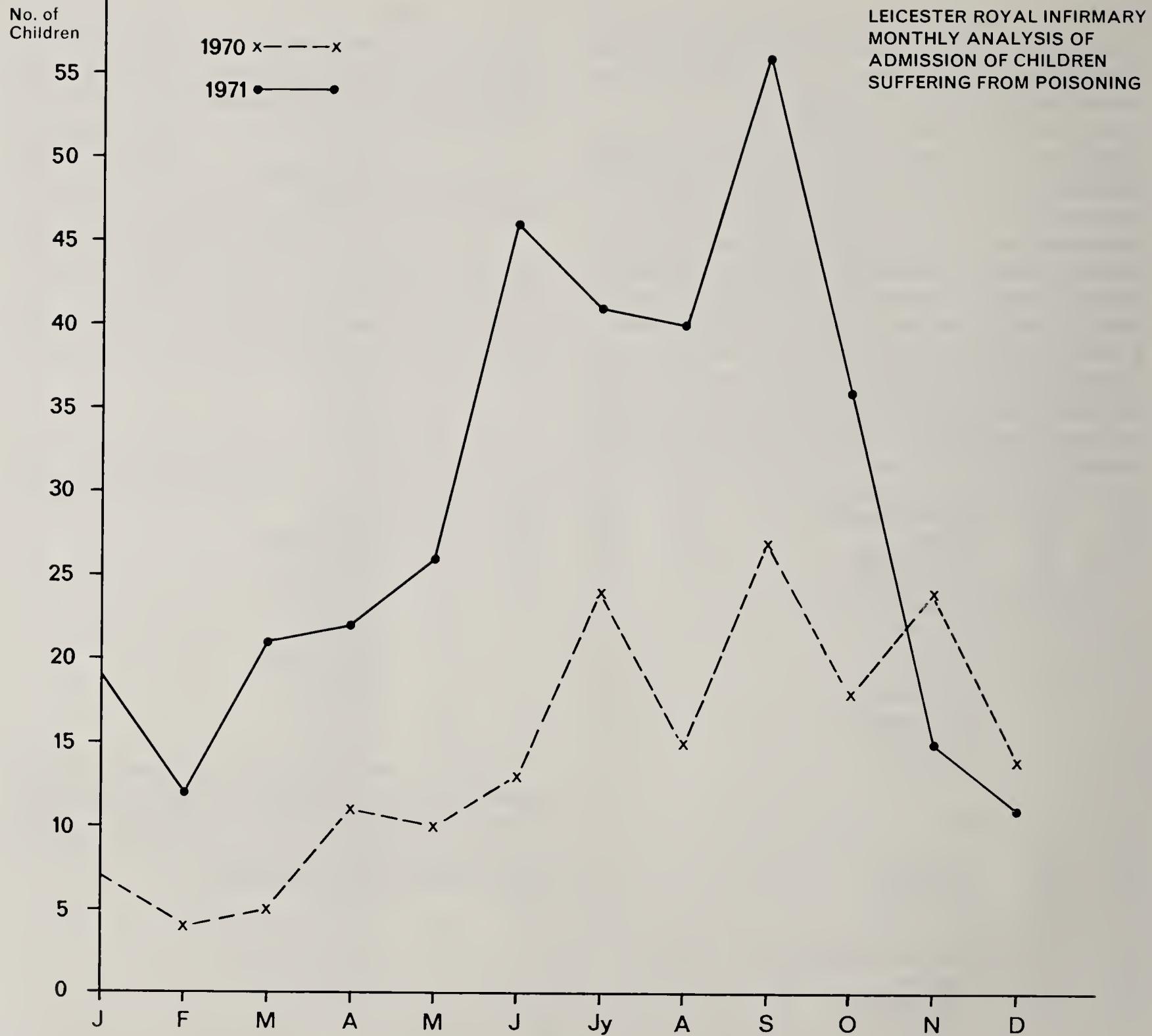
#### **Weedkillers & Pesticides**

- Weedol
- Nipon (ant killer)
- Warfarin

#### **Drugs**

- Junior Asprin
- cough syrup
- zinc calamine
- iron tablets
- Phenergan
- trinitrate
- amtryptylene
- eucalyptus
- phenylbutazone
- Sloanes linament
- Serenid D
- Tixylix
- Lederamyan
- Dimetone
- butabarbitone
- Tryptizol
- Plurivite
- Mogodon
- Kwells
- Dettol
- Lasix
- codeine
- ear drops
- Prednisolone
- wintergreen
- penicillin
- Anadin
- Betnovate
- chlorpromazine
- atropine
- Distaqine

All poisons, pesticides, drugs and caustic cleaning materials must be kept out of reach of children and preferably in locked cupboards. It is not the child's fault but negligence and lack of consideration on the part of parents that allows this unnecessary suffering to continue.



**Food poisoning 1971**

|                         | <b>General outbreaks</b>  |                                      | <b>Family outbreaks</b>   |                                      | <b>Sporadic cases</b>   |   | <b>Total</b>                   | <b>Total</b> |
|-------------------------|---------------------------|--------------------------------------|---------------------------|--------------------------------------|-------------------------|---|--------------------------------|--------------|
|                         | No. of separate outbreaks | No. of cases notified or ascertained | No. of separate outbreaks | No. of cases notified or ascertained | Notified or ascertained | No. of outbreaks and sporadic cases (columns 1, 3, 5) | No. of cases (columns 2, 4, 5) |              |
| <b>Causative agents</b> | <b>1</b>                  | <b>2</b>                             | <b>3</b>                  | <b>4</b>                             | <b>5</b>                | <b>6</b>  | <b>7</b>                       |              |
| S. Typhimurium          | .                         | .                                    | .                         | .                                    | 5                       | 5   | 5                              |              |
| Other Salmonellae       | .                         | .                                    | 1                         | 3                                    | 10                      | 11  | 13                             |              |
| Staph Aureus            | .                         | .                                    | .                         | .                                    | 2                       | .   | 2                              |              |
| <b>Total</b>            | <b>.</b>                  | <b>.</b>                             | <b>1</b>                  | <b>3</b>                             | <b>17</b>               | <b>16</b>   | <b>20</b>                      |              |

**Food poisoning due to Salmonellae other than *Salmonella Typhimurium***

|             |   |   |   |   |   |   |   |  |
|-------------|---|---|---|---|---|---|---|--|
| Indiana     | . | . | . | . | 1 | . | 1 |  |
| S. Thompson | . | . | . | . | 1 | . | 1 |  |
| Agona       | . | . | . | . | 2 | . | 2 |  |
| Saint Paul  | . | . | . | 1 | 1 | . | 2 |  |
| Stanley     | . | . | . | 1 | . | . | 1 |  |
| Infantis    | . | . | . | . | 1 | . | 1 |  |
| Untyped     | . | . | . | 1 | 4 | . | 5 |  |

### *Special Clinic for Leprosy Contacts*

There were 14 cases of leprosy at the beginning of 1971 on the register in Leicester. During the year two new notifications have increased the number to 16 cases. The Leicester Royal Infirmary is treating 13 patients and 3 are under the care of the Hospital for Tropical Diseases in London. All cases are now quiescent and non-infectious.

As in previous years a regular clinic is being held at the Health Department for observation of all close contacts of these patients. Each contact is observed for 2 – 5 years at 3 monthly intervals. The total number on our list in January, 1971 was 55 and at the end of the year the figure dropped to 34 contacts. The attendance was on the whole regular and the people were grateful for the supervision. None of the examined showed any signs of the disease. Nine persons were found to suffer from other skin conditions and referred for treatment.

The anti-tuberculous B.C.G. vaccination which gives some protection against leprosy was administered to those requiring it.

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#### **Leprosy cases and contacts**

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|                                     | Cases    |
|-------------------------------------|----------|
| No. of cases 1st January, 1971      | 14       |
| New notifications in 1971           | 2        |
| Cases taken off register in 1971    | .        |
| No. of cases 31st December, 1971    | 16       |
|                                     | Contacts |
| No. of contacts 1st January, 1971   | 55       |
| New contacts                        | 25       |
| Removed from observation            | 34       |
| No. of contacts 31st December, 1971 | 46       |
| No. of sessions 1971                | 24       |
| Total attendances 1971              | 148      |

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### *Effects of Immigration*

There are few elderly immigrants and it may be justifiable to assume by far the majority are under the age of 55. From the locally determined Census of school children it is known that immigrants represent approximately 17% of the total school population. If it is assumed that the proportion of immigrants in the under 55 population is equivalent to the proportion in schools this would put the total immigrant population at approximately 36,000.

Although this may be a very rough estimate it justifies further examination of the changing pattern that has occurred in the proportion of immigrants in schools over the past few years. Thus, in 1966, West Indians represented over 26% of the immigrant population, but now they have dropped to 13%. During the same period Pakistanis dropped from 7% to 3% and Indians have dropped from 48% to 38%. There has, however, been a marked rise in the number of Kenyan Asians who began to arrive in 1969 and have now reached 29% of the immigrants in schools. Kenyan Africans now represent 8% of the immigrant population and other African Commonwealth persons have reached 9%.

The main problem from a public health point of view is not the risk of importation of tropical diseases but the difficulty of communication with those who have a poor understanding of English. Although this has been a major problem with those arriving from India and Pakistan the same difficulty has not occurred with those from Kenya who frequently speak English well and have a higher degree of literacy. Should the number of immigrants who are unable to speak English, or to read their own language continue to rise, then the health problems are likely to increase, for without a common language it is extremely difficult to help and advise patients and their relatives and to seek their co-operation in undertaking any remedial measures that may be prescribed. This in turn inevitably leads to ineffective use of the National Health Service resources which are already under considerable stress.

Numbers alone are an inadequate measure of the changes that have occurred as a result of the continually increasing number of immigrants in Leicester. Before their arrival in the early 1960's it was already approved that the number of staff in the Department were inadequate to deal with the medical and social problems then existing in the city. The increased burden now carried by the Department is not represented in a direct proportion to the total population increase but by the rapid rise in the special risk groups. The number of staff per thousand population at risk has been reduced to such an extent that it is becoming increasingly difficult to maintain even the most elementary fire brigade service and the development of a planned comprehensive health programme is now impossible without substantial increases in the manpower resources.

Inevitably because of language and cultural difficulties each consultation and each visit will take a disproportionately longer period of time compared with a visit to an English speaking family. In many respects the situation in some areas may be likened to that existing in the 1930's – dealing with ignorance, illiteracy and malnutrition, the whole task made more difficult by the problem of language.

Although a proportion of the males speak some English, in some cases the women are actively discouraged from learning the language and opposition is expressed to advice given with a view to trying to improve their general health.

#### *The problem of tuberculosis*

The tracing and investigation of contacts is particularly troublesome. Not only do they require persuasion to attend the Chest Clinic but in a confirmed case further persuasion is necessary to ensure that they take the appropriate treatment.

#### *Characteristics of practices*

At present there are relatively few elderly immigrants resulting in the number of families and the number of children under 5 in immigrant practices being between two and

three times as many as in an equivalent practice in which the majority of patients are from the indigenous population. Likewise the number of cases of tuberculosis are between 7 and 16 times as great as in the remainder of the population.

Thus it can be seen that immigrant practices often situated in areas where the general conditions of the housing is poor, attract a large number of patients particularly at risk. If our own staff are to be able to carry out the necessary supervision and undertake an active programme of treatment, improved facilities must be provided and the staff themselves must be supported with adequate equipment and clerical assistance.

## *Pollution*

There is still a great reluctance on the part of many people to accept that the accumulation of the waste products of our industrialised society may create a serious hazard to the community. Although the eradication of black smoke has made a major contribution towards the reduction of atmospheric pollution there are a number of toxic chemicals which may be emitted in apparently 'clean smoke'. These chemicals may be precipitated over a wide area and depending upon their chemical constituents could act as herbicides or in certain circumstances cause injury to the health of people living in the fall-out area. A greater degree of responsibility must be shown by those who discharge waste with such an apparent lack of consideration for others.

During the course of 1971 examination of the soil of the Beaumont Leys area revealed unexpected levels of a number of metals, some of which were known to be capable, under the right circumstances, of causing ill effects in human beings. Although the area had been grazed by cattle and used for agricultural purposes for many years it had previously been used for sewage disposal. The proposed change in use of the land to provide new housing estates made consideration of this problem of chemical contamination one of urgency.

Careful enquiry revealed that although the toxic properties of a number of these chemicals were known, the level at which toxicity occurred had never been accurately determined. The only information available related in most instances to acute toxicity and certain permissible levels had been established in a rather arbitrary fashion to prevent acute poisoning. Little information, however, was available in regard to the long term cumulative effects that might arise from absorption of these substances.

After the most careful consideration the Council has, therefore, initiated a systematic chemical analysis of samples obtained over a large area. In addition, a variety of crops are being grown in order that further information may be

obtained regarding selectivity of the uptake of these various chemicals. It is interesting that although the problem in Leicester first arose in March 1971 by the end of the year it had become apparent that this was a national as well as local problem and at the time of writing a number of investigations are taking place in other areas of the Midlands because of the irresponsible dumping of cyanide. Cyanide is a well known poison and immediately evidence became available that this was being dumped public indignation was aroused. It is perhaps not so well appreciated that a wide variety of other chemicals are being disposed of in a fashion likely to be prejudicial to the health of the community. It is understood that the Government has now set up a Working Party on pollution as part of the United Kingdom's preparation for the United Nations' Conference on Human Environment to be held in Stockholm in 1972. It is to be hoped that the establishment of a Working Party will not delay the introduction of the necessary legislation to control the disposal of industrial waste.

Because of the increasing interest which has been aroused by the problems of pollution during the year some further information is given upon the results of investigation of soil samples on the proposed Housing Development Area at Beaumont Leys. This site had previously been used for sewage disposal.

Apart from bacteriological examinations soil samples were analysed for evidence of toxic materials. This included determination of total metal content, the available metal content and the water soluble toxic metals. Definition of these is given below:

*Total metal content* – Indicates the total metal content of a particular metal in the dried soil. In fields where the moisture of the soil may even exceed 30% the actual metal in the moist soil will be proportionately lower.

*Available metal* – This term applies to the amount of metal extracted from 5 grams of soil when treated with acetic acid.

This is usually much lower than the metal content and provides a more accurate indication of the possible toxic nature of the metal content towards plants.

*Water soluble toxic metal* – Water soluble toxic metal content of the soil was negligible.

**Values of Metal Contamination found on Beaumont Leys Pilot Scheme Site**

| Metal    | †Normal Value P.P.M. | *Maximum Value P.P.M. | Maximum Available P.P.M. | Average Available P.P.M. |
|----------|----------------------|-----------------------|--------------------------|--------------------------|
| Zinc     | 10-300               | 748                   |                          |                          |
| Copper   | -100                 | 225                   |                          |                          |
| Nickel   | 5-500                | 200                   |                          |                          |
| Chromium | 5-1000               | 1600                  |                          |                          |
| Lead     | -200 Leics. 50       | 680‡                  | 32                       | 10                       |
| Cadmium  | 0.4-1.0              | 17.0                  | 2.0                      |                          |
| Mercury  | 0.1-0.3              | 3.9                   |                          |                          |
| Arsenic  | -38                  | 51                    |                          |                          |

†These are either nationally accepted levels or, where these are not available, locally determined levels for Leicestershire County.

\*These values were usually found to coincide with the effluent outlet points.

‡A value of 868p.p.m. was found on the opposite side of the road to the Pilot Area. This high level was probably due to contamination of the grass verge by petrol fumes.

It is quite clear, however, that it is extremely unwise to draw deductions without a detailed knowledge of the location from whence the samples were obtained and even then interpretation of the significance of the contamination must be related to how much a person, whether adult or child, could consume under relatively normal circumstances. Thus it is probable on the basis of our figures that a child must 'eat' approximately 2 oz of soil per day over a few months before clinical lead poisoning is likely to occur. Despite this reservation, however, it is necessary that further examination should be carried out in order to determine the selective uptake by vegetables that may occur in soil contaminated by various metals. Secondly it is desirable to obtain more information about the possible significance of high levels of cadmium in the soil. Reports from Japan suggest that it could, under certain conditions, prove detrimental to health.

### *End of smallpox vaccination for the very young*

Routine vaccination against smallpox in their second year has been stopped by the Department of Health and Social Security. This decision was taken after careful consideration when it became evident that the risks of the average child coming into close contact with a case of smallpox was negligible. By comparison it must be recognised there are some complications that may arise occasionally from vaccination itself and it is to avoid these that vaccination as a routine procedure has been discontinued.

The prevalence of smallpox throughout the world has diminished but as a result of increased air travel the opportunity for cases to become widely dispersed from an endemic area still prevails. It is, therefore, of the utmost importance that Health Authorities should still maintain a high degree of vigilance in order that in the event of a case being detected immediate steps can be taken to trace contacts and to prevent the further spread of infection.

### *Cholera*

Cholera was last present in Leicester over a hundred years ago, but a number of outbreaks were recorded in both Asia and Europe during 1971. One case occurred in this country. This is a salutary reminder that the so-called tropical diseases are no longer confined to the tropics. With the ready facilities available for moving large masses of the population from one part of the world to another, diseases of this nature can easily be introduced. It must be realised however that the introduction of any of these diseases may occur as a result of importation by returning holiday makers or business men and need not be associated with the arrival of immigrants.

### *Geriatric Care*

Dr Alex Baker in his capacity as Director of the Hospital Advisory Service points out that in many cases acute Medical, Surgical and Orthopaedic beds are becoming

increasingly blocked by long term elderly patients. Leicester is no exception. There is a reluctance to accept that this problem is seriously disrupting the effective use of the existing hospital services. Some cold surgery has been halted entirely and waiting lists for admission will inevitably get longer. As with 'poor relations' nobody wants to have the old.

Some could return to or remain in their own homes if only there were adequate domiciliary staff to provide for their care. Others require the provision of accommodation suitable to their needs. Then it must be asked will adequate financial resources be made available to tackle this problem. The present arrangement whereby financial provision is made from two sources, Central and Local Government, prevents a concentrated attack upon the problem. Whilst the arguments grind on as to who shall pay, acute hospital beds continue to be blocked. Perhaps if we were old, lonely, lying in a wet bed because we were incontinent and hungry because there was no one to feed us, we would appreciate the need for action.

**Statistical comparisons – Leicester County Borough & England & Wales**

|  | 1962 | 1963  | 1964  | 1965  | 1966  | 1967  | 1968  | 1969  | 1970  | 1971  |
|--|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total Live Births (per 1000 population)                    |      |       |       |       |       |       |       |       |       |       |
| England and Wales  | 18.0 | 18.2  | 18.5  | 18.1  | 17.7  | 17.2  | 16.9  | 16.3  | 16.0  | 16.0  |
| Leicester C.B.   | 18.7 | 18.5  | 19.1  | 18.8  | 18.3  | 18.6  | 18.4  | 18.4  | 17.6  | 16.9  |
| Illegitimate Live Births (per 1000 total live births)      |      |       |       |       |       |       |       |       |       |       |
| England and Wales  | 66   | 69    | 72    | 77    | 79    | 84    | 85    | 84    | 82    | 80    |
| Leicester C.B.   | 99.3 | 113.0 | 109.3 | 122.8 | 120.8 | 126.8 | 123.1 | 130.9 | 129.3 | 120.0 |
| Stillbirths (per 1000 live and stillbirths)                |      |       |       |       |       |       |       |       |       |       |
| England and Wales  | 18.1 | 17.2  | 16.3  | 15.8  | 15.3  | 14.8  | 14.3  | 13.2  | 13.0  | 12.2  |
| Leicester C.B.   | 17.8 | 19.2  | 18.7  | 13.4  | 16.3  | 16.6  | 17.8  | 14.3  | 12.4  | 13.0  |
| Deaths (per 1000 population)                               |      |       |       |       |       |       |       |       |       |       |
| England and Wales  | 11.9 | 12.2  | 11.3  | 11.5  | 11.7  | 11.2  | 11.9  | 11.9  | 11.7  | 11.6  |
| Leicester C.B.   | 12.8 | 13.2  | 12.5  | 12.6  | 12.2  | 11.7  | 12.5  | 13.0  | 12.5  | 12.3  |
| Infant Mortality (per 1000 live births)                    |      |       |       |       |       |       |       |       |       |       |
| England and Wales  | 21.7 | 21.1  | 19.9  | 19.0  | 19.0  | 18.3  | 18.3  | 18.0  | 18.2  | 17.6  |
| Leicester C.B.   | 23.2 | 21.4  | 22.8  | 21.5  | 27.0  | 21.3  | 19.8  | 24.4  | 21.0  | 22.0  |
| Neo-natal Mortality (per 1000 live births)                 |      |       |       |       |       |       |       |       |       |       |
| England and Wales  | 15.1 | 14.3  | 13.8  | 13.0  | 12.9  | 12.5  | 12.4  | 12.0  | 12.3  | 12.0  |
| Leicester C.B.   | 14.4 | 15.0  | 16.1  | 14.0  | 16.6  | 15.4  | 12.3  | 14.1  | 11.3  | 14.0  |
| Perinatal Mortality (per 1000 live births and stillbirths) |      |       |       |       |       |       |       |       |       |       |
| England and Wales  | 30.8 | 29.3  | 28.2  | 26.9  | 26.3  | 25.4  | 24.7  | 23.4  | 23.5  | 22.0  |
| Leicester C.B.   | 28.8 | 32.4  | 32.2  | 25.4  | 30.6  | 30.3  | 27.9  | 26.0  | 22.5  | 26.0  |

### *Live births*

The live birth rate which reached its peak in 1964 in Leicester has declined much slower than that of the national average resulting in a continued high demand for maternity services.

### *Illegitimate live births*

The proportion of illegitimate births in Leicester has always been substantially higher than the national average although the decline which first appeared in 1969 appears to have continued into 1971.

### *Stillbirths*

There has been some fluctuation in the number of still-births occurring over the past decade but there is some evidence to suggest that the peak that occurred in the mid 60's associated with the arrival of large numbers of immigrants may now be declining as they are becoming more aware of the need for ante-natal care and seek this at an earlier stage of pregnancy.

### *Deaths*

The death rate is slightly higher than the national average but despite this fact the proportion of elderly people in the population is steadily mounting and the increasing number of very old, frail and sick persons is causing grave concern as neither domiciliary nor residential facilities are adequate to deal with them.

The fluctuation in the infant mortality level that has occurred over the past decade is probably associated with the absorption into the community of large numbers of immigrant mothers whose knowledge and standards of care are only slowly improving.

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# Tuberculosis

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Report on the Chest Clinic for 1971  
by C M Connolly, *MD, MRCP, DPH*

221 new cases of tuberculosis were registered during the year as compared with 220 in 1970. These figures include the 'transfer in' cases who came to live in the City during the year.

|               | 1971 | 1970 | 1969 | 1968 |
|---------------|------|------|------|------|
| Pulmonary     | 153  | 151  | 136  | 126  |
| Non-pulmonary | 68   | 69   | 80   | 49   |
| Total         | 221  | 220  | 216  | 175  |

The number of new cases in Asian immigrants was 89 pulmonary and 50 non-pulmonary in 1971 as against 89 pulmonary and 52 non pulmonary in 1970. Excluding transfers and 'lost sight of' cases the pulmonary cases in Asians (89) accounted for 67.4% of the total of new pulmonary cases in the City and the non-pulmonary cases in Asians (50) accounted for 86.2% of the total non-pulmonary cases found during the year.

#### The number of new cases in Asians since 1965

|               | 1971 | 1970 | 1969 | 1968 | 1967 |
|---------------|------|------|------|------|------|
| Pulmonary     | 89   | 89   | 75   | 62   | 50   |
| Non-pulmonary | 50   | 55   | 52   | 35   | 29   |
| Total         | 139  | 144  | 127  | 97   | 79   |

#### New cases including transfers in since 1965

|               | 1971 | 1970 | 1969 | 1968 | 1967 | 1966 | 1965 |
|---------------|------|------|------|------|------|------|------|
| Pulmonary     | 153  | 151  | 136  | 126  | 114  | 175  | 165  |
| Non-pulmonary | 68   | 69   | 80   | 49   | 44   | 37   | 28   |
| Total         | 221  | 220  | 216  | 175  | 158  | 212  | 193  |

#### % Distribution of cases in immigrants for 1971

67.4% of total pulmonary cases

86.2% of total non-pulmonary cases

73% of total notifications

#### Sources of the cases of tuberculosis registered during 1971

|                                    | Pulmonary | Non-pulmonary | Total |
|------------------------------------|-----------|---------------|-------|
| Transferred in from other areas    | 20        | 10            | 30    |
| Referred by General Practitioners  | 91        | 43            | 134   |
| Referred by hospital doctors       | 3         | 13            | 16    |
| Referred by Mass Radiography Unit  | 12        | .             | 12    |
| Discovered on Contact X-ray        | 15        | .             | 15    |
| Scheme for X-ray of pregnant women | 5         | .             | 5     |
| School case finding scheme         | 3         | .             | 3     |
| Death adjustments                  | 2         | 2             | 4     |
| "Lost sight of" cases returned     | 1         | .             | 1     |
| New immigrants                     | 1         | .             | 1     |
| Total                              | 153       | 68            | 221   |

| <b>Sex and age groups</b> of those notified during 1971 |         | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
|---|---------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| <b>Pulmonary</b>  | males   | .   | 4   | 1     | 10    | 10    | 15    | 9     | 12    | 6     | 6   | 73    |
|   | females | 5   | 1   | 3     | 7     | 10    | 12    | 7     | 9     | 3     | 2   | 59    |
| <b>Non-pulmonary</b>                                    | males   | .   | 1   | 1     | 3     | 2     | 7     | 3     | 6     | .     | .   | 23    |
|   | females | 3   | 3   | 1     | 2     | 7     | 8     | 7     | 2     | 2     | .   | 35    |

| <b>Sex and age groups</b> of those transferred in from other areas and "lost sight of" cases returned |         | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
|---|---------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| <b>Pulmonary</b>  | males   | .   | .   | .     | .     | 1     | 4     | 3     | 1     | .     | .   | 9     |
|   | females | .   | .   | 4     | .     | 2     | 5     | 1     | .     | .     | .   | 12    |
| <b>Non-pulmonary</b>  | males   | 1   | .   | .     | .     | 1     | .     | 3     | 1     | .     | .   | 6     |
|   | females | .   | .   | .     | 1     | .     | 3     | .     | .     | .     | .   | 4     |

| <b>Contacts x-rayed during past 4 years</b>   | 1971 | 1970 | 1969 | 1968 |
|---|------|------|------|------|
| Number of contacts examined                   | 2814 | 2062 | 2232 | 1928 |
| Number of contacts found to have tuberculosis | 15   | 19   | 20   | 13   |

| <b>School case-finding scheme</b>  | 1971 | 1970 | 1969 | 1968 |
|--|------|------|------|------|
| Tuberculin positive school-children and their contacts, including school entrants, immigrants and school leavers | 424  | 468  | 813  | 805  |
| Number found to have tuberculosis  | 3    | 5    | 8    | 12   |

| <b>Radiological examination of expectant mothers</b> | 1971 | 1970 | 1969 | 1968 |
|--|------|------|------|------|
| Number of expectant mothers x-rayed                  | 1642 | 1615 | 1363 | 1461 |
| Number found to have tuberculosis                    | 5    | 1    | 1    | 4    |

| <b>B.C.G. Vaccination</b>     | 1971 | 1970 | 1969 | 1968 |
|-------------------------------|------|------|------|------|
| Number of B.C.G. Vaccinations | 691  | 496  | 626  | 697  |

|               |  |   |
|---------------|--|---|
| <b>Deaths</b> | Deaths due to Pulmonary tuberculosis     | 6 |
|               | Deaths due to Non-pulmonary tuberculosis | 3 |

| Number of deaths from tuberculosis in Leicester during the past five years | Phthisis |                             | Other tuberculous diseases |                             | Total tuberculous deaths |                             |
|--|----------|-----------------------------|----------------------------|-----------------------------|--------------------------|-----------------------------|
|  | Deaths   | Rate per 100,000 population | Deaths                     | Rate per 100,000 population | Deaths                   | Rate per 100,000 population |
| 1971   | 6        | 2.1                         | 3                          | 1.0                         | 9                        | 3.15                        |
| 1970   | 6        | 2.15                        | 3                          | 1.0                         | 9                        | 3.2                         |
| 1969   | 6        | 2.15                        | 7                          | 2.51                        | 13                       | 4.66                        |
| 1968   | 6        | 2.1                         | 3                          | 1.0                         | 9                        | 3.2                         |
| 1967   | 10       | 3.53                        | 3                          | 1.06                        | 13                       | 4.6                         |

The above figures for 1971 include 3 death adjustments, and 1 posthumous notification.

| Chronic cases             | 1971 | 1970 | 1969 | 1968 | 1967 |
|---------------------------|------|------|------|------|------|
| Number of resistant cases | .    | .    | 2    | 4    | 4    |

#### Recovered cases

During the year the names of 117 patients were removed from the tuberculosis register as having recovered. Of these 89 were pulmonary and 28 were non-pulmonary. Of the pulmonary cases 45 had tubercle bacilli in their sputum.

| Clinical examinations | Men  | Women | Children | Total |
|-----------------------|------|-------|----------|-------|
| First examinations    | 2932 | 2053  | 437      | 5422  |
| Re-examinations       | 1644 | 985   | 184      | 2813  |

| Radiological examinations | 1971  | 1970  | 1969  | 1968  |
|---------------------------|-------|-------|-------|-------|
|                           | 14295 | 14327 | 14057 | 13925 |

#### Radiological examinations

General Practitioners in Leicester requested an opinion on 4479 patients, 3583 were referred for the first time and the remainder were cases who had been X-rayed before.

**Analysis of cases on Chest Clinic register**

|  | Diagnosis                                     | Pulmonary |       |          | Non-pulmonary |       |          | Total |       |          | Grand Totals |
|--|---|-----------|-------|----------|---------------|-------|----------|-------|-------|----------|--------------|
|  |   | Men       | Women | Children | Men           | Women | Children | Men   | Women | Children |              |
| <b>A</b> New cases examined clinically and/or radiologically | Definitely TB                                 | 64        | 43    | 5        | 19            | 32    | 5        | 83    | 75    | 10       | 168          |
|  | Diagnosis not completed and under observation |           |       |          |               |       |          | 151   | 72    | 38       | 261          |
|  | Non-tuberculous                               |           |       |          |               |       |          | 2827  | 3628  | 421      | 6876         |
| <b>B</b> New contacts examined during the year               | Definitely TB                                 | 5         | 2     | 8        |               |       |          | 5     | 2     | 8        | 15           |
|  | Diagnosis not completed and under observation |           |       |          |               |       |          | 4     | 2     | 2        | 8            |
|  | Non-tuberculous                               |           |       |          |               |       |          | 475   | 461   | 103      | 1039         |
| <b>C</b> Cases written off Chest Clinic register             | Recovered                                     | 48        | 32    | 9        | 14            | 13    | 1        | 62    | 45    | 10       | 117          |
|  | Non-tuberculous                               |           |       |          |               |       |          | 3537  | 4206  | 539      | 8282         |
| <b>D</b> Number of cases                                     | Definitely TB                                 | 448       | 298   | 55       | 107           | 144   | 16       | 555   | 442   | 71       | 1068         |
|  | Diagnosis not completed and under observation |           |       |          |               |       |          | 330   | 173   | 68       | 572          |

- 1 Number of cases on Clinic Register on 1st January, 1971, including observation cases 1714
- 2 Number of cases transferred in from other areas, also "lost sight of" cases returned 31
- 3 Number of cases transferred to other areas, cases not desiring further assistance under the scheme, cases "lost sight of" and cases where the diagnosis has not been established 60
- 4 Cases written off during the year as dead (all causes) 13
- 5 Number of attendances at the Clinic for all purposes 17213
- 6 Number of chest X-ray films taken during the year 14295
- 7 Number of persons receiving B C G vaccine at the Clinic during the year 691
- 8 Number X-rayed under the scheme for X-ray of pregnant women 1642

1971 has shown a halt in the rising number of pupils aged 13 who were found to be positive when tested for tuberculosis.

|                                       | 1967 | 1968 | 1969  | 1970  | 1971  |
|---------------------------------------|------|------|-------|-------|-------|
| Number of pupils found to be positive | 266  | 187  | 346   | 445   | 397   |
| %                                     | 17.1 | 7.82 | 12.63 | 17.36 | 14.85 |

At the same time there has been a reduction in the number of immigrant pupils of all ages found to be positive.

|                                       | 1967 | 1968  | 1969  | 1970  | 1971  |
|---------------------------------------|------|-------|-------|-------|-------|
| Number of pupils found to be positive | 307  | 388   | 414   | 190   | 184   |
| %                                     | 40.4 | 40.42 | 52.80 | 33.10 | 22.97 |

These trends may be associated with the different characteristics of the immigrants now arriving in Leicester. The more recent arrivals from Kenya and Uganda have a higher socio-economic level and may have had less previous exposure to adverse conditions such as poverty and malnutrition.

Because of their higher educational attainments they are in a better position to obtain more skilled work at a higher rate of pay, thus enabling them to obtain better housing and living conditions when settling in the City.

It is also evident at the time of examination that an increasing number of immigrant pupils in the age range 11-12 years have already received B.C.G. vaccination at an earlier age.

|  | 1967 | 1968 | 1969 | 1970 | 1971 |
|--|------|------|------|------|------|
| Number of pupils found to be positive, previously vaccinated | 226  | 570  | 374  | 460  | 583  |

Thus, in 1967 the number found who had previously been vaccinated was 226 and by 1971 this had risen to 583.

## Tuberculosis

### Trend of Tuberculosis in Children 5-14 years over the last 5 years

|   | 1967   | 1968   | 1969   | 1970   | 1971   |
|---|--------|--------|--------|--------|--------|
| Pulmonary tuberculosis cases notified with number of immigrants shown in brackets     | 11 (8) | 13(11) | 15(13) | 11(11) | 9 (7)  |
| Non Pulmonary tuberculosis cases notified with number of immigrants shown in brackets | 4 (2)  | 5 (5)  | 6 (4)  | 3 (3)  | 6 (4)  |
| Total (total immigrants shown in brackets)  | 15(10) | 18(16) | 21(17) | 14(14) | 15(11) |
| Immigrants as percentage of total   | 67%    | 89%    | 80%    | 100%   | 73%    |
| School entrants   |        |        |        |        |        |
| Tuberculin skin tested  | 2452   | 2519   | 2771   | 2794   | 3421   |
| Number found positive   | 144    | 158    | 189    | 211    | 318    |
| Percentage positive   | 5.8%   | 6.2%   | 6.8%   | 7.5%   | 9.3%   |

### Difficulties associated with contact tracing

Once an initial case of tuberculosis has been diagnosed there may be considerable difficulty in tracing other contacts due to the lack of co-operation of the patients and his family. The following case illustrates some of these difficulties.

Mr. X arrived in the United Kingdom in 1964 at which time he was known to have had a clear X-ray. In 1965 his wife arrived in this country leaving one child in the care of relatives abroad. Both husband and wife were students.

A second child was born in 1967 and a third in 1969. There had always been difficulty in maintaining contact with the family and it is known that the children were illegally minded for much of the time. Between 1967 and 1971 the children lived in at least 4 separate official addresses, but in addition were minded by at least 4 other illegal minders on both a day and residential basis.

On 8th July 1971, the mother applied for a day nursery place and was subsequently traced by the health visitor. At that time the children appeared well.

On 21st July 1972, one child was admitted to Leicester Isolation Hospital with a diagnosis that was subsequently confirmed as miliary tuberculosis.

On 28th July 1972, the parents were checked at the Chest Clinic and found to be clear, but at the same time it was reported that the daughter of one of the minders had been admitted to hospital with tuberculosis in April 1971.

On 31st July 1972, the second child was found to have a Grade 4 positive heaf test and arrangements were made for the family to see the Chest Physician. They did not appear. Subsequently after further visits from the health visitor the father was traced at work and brought the child to the clinic. Because of its condition the child was admitted to hospital.

The father, however, denied knowledge of the whereabouts of the mother.

In the meantime efforts had been made to persuade the child minder and her family to attend the clinic, but without result.

Tuberculosis can still be a dangerous and, indeed, fatal disease. Lack of co-operation by contacts may result in the spread of infection. The danger that arises if a person with tuberculosis has the care of young children is illustrated by this case. Failure to divulge their illegal occupation resulted in the death of one child and the admission of a second to hospital.

#### Incidence of Tuberculosis in Leicester school children 1967-1971

|                  | 1967  | 1968  | 1969  | 1970   | 1971   |
|------------------|---|---|---|--|--|
| Pulmonary T.B.   | 1 @ 5 yr. 1 @ 6 yr.<br>*1 @ 8 yr. (+ hip)<br>2 @ 9 yr. 1 @ 10 yr.<br>1 @ 11 yr. 2 @ 12 yr.<br>2 @ 14 yr. 1 @ 15 yr. | 2 @ 6 yr. 1 @ 9 yr.<br>2 @ 11 yr. 2 @ 12 yr.<br>3 @ 13 yr. 2 @ 14 yr.<br>1 @ 15 yr. | 3 @ 5 yr. 2 @ 9 yr.<br>1 @ 11 yr. 1 @ 12 yr.<br>2 @ 13 yr. 6 @ 14 yr.<br>2 @ 15 yr. | 2 @ 6 yr. 1 @ 7 yr.<br>1 @ 8 yr. 1 @ 9 yr.<br>1 @ 10 yr. 1 @ 11 yr.<br>2 @ 12 yr. 1 @ 13 yr.<br>1 @ 14 yr. 1 @ 15 yr.<br>1 @ 14 yr. 1 @ 15 yr. | 1 @ 4 yr. 1 @ 5 yr.<br>1 @ 6 yr. 3 @ 7 yr.<br>2 @ 12 yr. 1 @ 13 yr.<br>1 @ 14 yr. 1 @ 15 yr.<br>1 @ 16 yr. |
| T.B. Glands      | 1 @ 9 yr.   | 1 @ 9 yr. 1 @ 11 yr.<br>1 @ 14 yr.  | 1 @ 10 yr. 1 @ 14 yr.<br>1 @ 15 yr.   | 1 @ 8 yr. 1 @ 15 yr.<br>1 @ 14 yr.   | 1 @ 6 yr. 1 @ 8 yr.<br>1 @ 11 yr. 1 @ 12 yr.   |
| Renal T.B.       | 1 @ 7 yr.   |   |   |  |  |
| T.B. Peritonitis |   |   | 1 @ 10 yr.  |  |  |
| T.B. Meningitis  |   |   | 1 @ 6 yr.   |  | 1 @ 9 yr.  |
| T.B. Cutis       |   |   |   |  |  |
| T.B. Spine       |   | 1 @ 8 yr.   |   |  |  |
| T.B. Ribs        |   | 1 @ 12 yr.  |   |  |  |
| T.B. Hip         | *1 @ 8 yr.  |   |   |  |  |
| T.B. Knee        |   |   |   | 1 @ 13 yr.   |  |
| T.B. Ankle       | 1 @ 12 yr.  |   |   |  |  |
| T.B. Dactylitis  |   |   |   |  | 1 @ 8 yr.  |
| Total            | 15  | 18  | 22  | 16   | 20   |

\* This child had Pulmonary T.B. and T.B. of Hip, and has been counted as one.

## Leicester Area Mass Radiography Unit

Report on Surveys carried out in the City of Leicester, 1971.

I am indebted to Dr. E. M. Quinn, Medical Director, for the following report:

During the year under review the Unit spent five months in the City and seven months in the County areas due to a rather heavy commitment in the County towards the end of the year.

The groups x-rayed consisted of the general public; organised groups; doctor's referrals; students; schools' staff; tuberculin skin positive school children; playgroup leaders; child minders; contacts and prisoners.

Visits were made to the Scrattoft Training College, Barkby Road Industrial Area; Marconi Radar Systems; H.M.

Prison; Central Electricity Generating Station and East Midlands Electricity Board.

16,702 persons were x-rayed during the year (24,458 in 1970).

10 cases (20 in 1970) of pulmonary tuberculosis requiring close supervision were discovered – 7 males and 3 females. Of these, 5 were Asian immigrants.

380 examinees were referred by General Practitioners (570 in 1970). 2 cases of pulmonary tuberculosis were found in this group.

Only one case was found in the public sessions as against 6 in the organised groups.

8 cases of malignant neoplasm were found, 6 male and 2 female (12 cases in 1970).

### Leicester (City) 1971

| Group                    | Initial X-ray |          |              | TB close supervision |          | Rate per 1000 | TB occasional supervision |          | Bronchiectasis |          | Cardiac  |          | Pneumoconiosis |          | Malignant neoplasm |          | Non-malignant neoplasm |          | Sarcoid  |          |
|--------------------------|---------------|----------|--------------|----------------------|----------|---------------|---------------------------|----------|----------------|----------|----------|----------|----------------|----------|--------------------|----------|------------------------|----------|----------|----------|
|                          | <i>m</i>      | <i>f</i> | <i>Total</i> | <i>m</i>             | <i>f</i> |               | <i>m</i>                  | <i>f</i> | <i>m</i>       | <i>f</i> | <i>m</i> | <i>f</i> | <i>m</i>       | <i>f</i> | <i>m</i>           | <i>f</i> | <i>m</i>               | <i>f</i> | <i>m</i> | <i>f</i> |
| Public sessions          | 2599          | 2898     | 5497         | 1                    | .        | 0.19          | 1                         | .        | 2              | 1        | 8        | 6        | .              | .        | 1                  | 1        | .                      | .        | .        | .        |
| Doctor's patients        | 213           | 167      | 380          | 1                    | 1        | 5.26          | .                         | .        | 5              | .        | 3        | 7        | .              | .        | 2                  | .        | .                      | .        | .        | .        |
| Organised groups         | 6410          | 3782     | 10192        | 4                    | 2        | 0.60          | 2                         | .        | 7              | 2        | 12       | 3        | 2              | .        | 2                  | 1        | .                      | .        | .        | .        |
| Students                 | 81            | 257      | 338          | .                    | .        | .             | .                         | .        | .              | .        | .        | .        | .              | .        | .                  | .        | .                      | .        | .        | .        |
| Prisoners                | 181           | .        | 181          | 1                    | .        | 5.50          | .                         | .        | .              | .        | .        | .        | .              | .        | 1                  | .        | .                      | .        | .        | .        |
| Contacts                 | 6             | 12       | 18           | .                    | .        | .             | .                         | .        | .              | .        | .        | .        | .              | .        | .                  | .        | .                      | .        | .        | .        |
| Schools<br>Outward Bound | 18            | .        | 18           | .                    | .        | .             | .                         | .        | .              | .        | .        | .        | .              | .        | .                  | .        | .                      | .        | .        | .        |
| Skin+ve                  | 38            | 40       | 78           | .                    | .        | .             | .                         | .        | .              | .        | .        | .        | .              | .        | .                  | .        | .                      | .        | .        | .        |
| Totals                   | 9546          | 7156     | 16702        | 7                    | 3        | 0.60          | 3                         | .        | 14             | 3        | 23       | 16       | 2              | .        | 6                  | 2        | .                      | .        | .        | .        |



Mrs. Dight, contact tracer (V.D.), reports as follows:

In six months there have been 260 referrals from Dr. Reed and his colleagues and so there is a need to be met. 138 were for visits, either for defaulting or contact tracing, 17 of those were visits for the Loughborough clinic. The remaining 122 were interviews in the clinic. The patients are of both sexes, from all classes, of varying ages and include some immigrants. Most of them have been seen at least twice and many 4 times and a few 8 times. Relatives were visited at home and interviewed at the Clinic on several occasions when this was relevant to the patient's need and was what she wanted. A freshly devised system of case recording to fit the specialised work will be in use soon and by next year there can be a more meaningful breakdown of these figures.

The clinic interviews were either to facilitate contact tracing, or to give social work support. These two components cannot always be separated and the services required range from relatively simple problems to complex personal situations, involving considerable emotional disturbances. Stable relationships and married couples come into this last category. Feelings run very high when the disease is diagnosed and the partner is asked to attend. The couple will either grow closer or fall right apart, depending on how well they negotiate the crisis. The presence of a third party who can absorb some of the shock and restore sweet reasonableness before too many hurtful things are said can often weigh the balance in favour of the marriage.

Common to both aspects of the work is the need for a social work approach in offering a supportive relationship through a difficult period, to cope with treatment and understand it, to clarify an emotional problem, to face up to the implications and make a decision which may involve acceptance of a referral elsewhere – the Family Planning Association, The Birmingham Pregnancy Advisory Service, the Leicester Diocesan Council for Social Work, the Careers Officer, a Psychiatrist.

Liaison with Health Visitors, Probation Officers, Social Workers, is frequent. There is opportunity for some preventative work in counselling the young who arrive very frightened and in fact have no infection but who are very relieved to talk and seek re-assurance.

It is good to work in a setting where the accent is on positive cure. However, there is the recurring problem of re-infection often surrounded by a mass of negative feelings: A lack of achievement and satisfaction in relationships at home where the parents' marriage is often broken, a lack of fulfillment at work with under-achievement topped by a feeling of "what does it all matter to anyone else anyway." The therapy here is the quality of the personal service and its impact on the patient over the 3 months attendance necessary for surveillance. This is an important weapon in the war against the disease as only an increased self-regard and understanding can bring an increased responsibility towards others and so stem the tide. This service is now extended by the addition of a social worker for those in special need.

Attendance at the Annual Study Day on May 12th as a new member of the recently formed association of workers in this special field, confirms the fact that this beginning made in Leicester is part of a mounting campaign on a national basis as the realisation grows of the appalling wastage of human potential expressed in the high incidence of this 'dis-ease'.

**Venereal Disease - new cases - City residents**

|                                   | 1967 | 1968  | 1969  | 1970  | 1971  |
|-----------------------------------|------|-------|-------|-------|-------|
| <i>Syphilis</i>                   |      |       |       |       |       |
| Local males                       | .    | 7     | 16    | 8     | 11    |
| Immigrant males                   | 13   | 4     | 1     | 2     | 2     |
| Local females                     | .    | 1     | 14    | 6     | 5     |
| Immigrant females                 | 9    | 1     | 2     | 2     | 1     |
| Total males                       | 13   | 11    | 17    | 10    | 13    |
| Total females                     | 9    | 2     | 16    | 8     | 6     |
| <i>Gonorrhoea</i>                 |      |       |       |       |       |
| Local males                       | 57   | 121   | 201   | 210   | 188   |
| Immigrant males                   | 124  | 105   | 150   | 199   | 124   |
| Local females                     | 89   | 66    | 170   | 311   | 276   |
| Immigrant females                 | 21   | 19    | 25    | 52    | 48    |
| Total males                       | 181  | 226   | 351   | 405   | 312   |
| Total females                     | 110  | 85    | 195   | 363   | 324   |
| % Total Gonorrhoea cases under 20 | 14%  | 17.5% | 16.8% | 29.7% | 30.8% |
| <i>Homosexuals</i>                |      |       |       |       |       |
| <i>Syphilis</i>                   |      |       |       |       |       |
| Local males                       | *    | .     | .     | .     | 2     |
| Immigrant males                   | *    | .     | .     | .     | 1     |
| <i>Gonorrhoea</i>                 |      |       |       |       |       |
| Local males                       | *    | .     | 33    | 23    | 19    |
| Immigrant males                   | *    | .     | 1     | 2     | 2     |

\* Not known

**New cases treated at Leicester Royal Infirmary Special Clinic during 1971 (city and non-city residents)**

| Age groups | Syphilis |      |        | Gonorrhoea |      |        |
|------------|----------|------|--------|------------|------|--------|
|            | Total    | Male | Female | Total      | Male | Female |
| under 16   | .        | .    | .      | 8          | 1    | 7      |
| 16 & 17    | 1        | 1    | .      | 95         | 23   | 72     |
| 18 & 19    | .        | .    | .      | 158        | 59   | 99     |
| 20 - 24    | 2        | 1    | 1      | 287        | 151  | 136    |
| Over 25    | 6        | 5    | 1      | 316        | 225  | 91     |
| Total      | 9        | 7    | 2      | 864        | 459  | 405    |

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## Vaccination and Immunisation

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### Diphtheria immunisation (a) Primary immunisation

Table 1

| Year of birth | Year of immunisation and numbers immunised |      |      |      |      |
|---------------|--|------|------|------|------|
|               | 1971                                       | 1970 | 1969 | 1968 | 1967 |
| 1971          | 7  |      |      |      |      |
| 1970          | 3028                                       | 36   |      |      |      |
| 1969          | 606  | 2907 | 156  |      |      |
| 1968          | 47   | 149  | 1959 | 1669 |      |
| 1967          | 19   | 37   | 134  | 2015 | 1769 |

### Diphtheria (b) Reinforcing doses

Table 2

| Year immunised | Year of Birth |      |      |      |      |      |      |      |      |      |      | Totals        |           |
|----------------|---------------|------|------|------|------|------|------|------|------|------|------|---------------|-----------|
|                | 1971          | 1970 | 1969 | 1968 | 1967 | 1966 | 1965 | 1964 | 1963 | 1962 | 1961 | under 5 years | 5-9 years |
| 1971           |               |      |      | 141  |      | 3034 |      |      |      |      |      | 141           | 3034      |
| 1970           |               |      | 1    | 1845 | 185  |      | 3159 |      |      |      |      | 2031          | 3159      |
| 1969           |               |      |      | 796  | 1755 | 241  |      | 2594 |      |      |      | 2792          | 2594      |
| 1968           |               |      |      |      | 774  | 1757 | 271  |      | 2855 |      |      | 2802          | 2855      |

### Whooping cough vaccination

Table 3

Number of children receiving whooping cough vaccination in 1971

|  |      |
|--|------|
| Completing course of primary vaccination | 3634 |
| Receiving booster dose                   | 286  |

### Measles vaccination

Table 4

Number of children receiving primary measles vaccination in 1971 3545

### Tetanus immunisation

Table 5

Number of children up to age 16 years receiving tetanus vaccination in 1971

|  |      |
|--|------|
| Completing course of primary vaccination | 4069 |
| Receiving booster dose                   | 3417 |

### Poliomyelitis Vaccination

Table 6 Number of doses of oral vaccine

|   | 0-4 years | 5-9 years | 10-15 years | Total |
|---|-----------|-----------|-------------|-------|
| Third dose<br>(i.e. Primary course completed) | 3701      | 384       | 46          | 4131  |
| Fourth dose<br>(i.e. booster dose)            | 140       | 2866      | 110         | 3116  |

## Smallpox Vaccination

Table 7 Number of persons vaccinated against smallpox in 1971

|  |                     | Under 1 year | 1 yr. & under 2 | 2-4 years | 5-14 years | Total |
|--|---------------------|--------------|-----------------|-----------|------------|-------|
|  | Primary vaccination | 38           | 1390            | 312       | 292        | 2032  |
|  | Re-vaccination      | 1            | 1               | 89        | 321        | 412   |

## Infant vaccination against smallpox

Table 8

|      | Number of children<br>vaccinated during the year<br>at recommended age | Live births<br>in same year | % of<br>live births |
|------|--|-----------------------------|---------------------|
| 1971 | 1460   | 4756                        | 30.70               |
| 1970 | 1583   | 4866                        | 30.48               |
| 1969 | 1887   | 5118                        | 36.87               |
| 1968 | 1875   | 5143                        | 36.46               |
| 1967 | 1822   | 5267                        | 34.59               |
| 1966 | 1559   | 5117                        | 30.47               |
| 1965 | 1457   | 5018                        | 29.03               |
| 1964 | 1038   | 5087                        | 20.40               |
| 1963 | 324  | 4999                        | 6.48                |
| 1962 | 1937   | 5087                        | 38.08               |
| 1961 | 424  | 4671                        | 9.08                |

## Immunisation against Diphtheria, Whooping Cough (Pertussis), Tetanus, Poliomyelitis, Measles and Smallpox in 1971

Table 9

| Immunisation<br>Centre | Diph/Tet/Pert<br>Primary Boost | Diph/Tet<br>Primary Boost | Diphtheria<br>Primary Boost | Tetanus<br>Primary Boost | Poliomyelitis<br>Primary Boost | Measles<br>Primary | Rubella<br>Primary | Smallpox<br>Primary Booster |
|------------------------|--------------------------------|---------------------------|-----------------------------|--------------------------|--------------------------------|--------------------|--------------------|-----------------------------|
| General Practitioner   | 44                             | 236                       | 19                          | 261                      | .                              | 1                  | 33                 | 211                         |
| Local Authority Clinic | 14                             | 50                        | 16                          | 96                       | .                              | .                  | .                  | 34                          |
| Infant School }        | .                              | .                         | 292                         | 2558                     | 47                             | 70                 | 7                  | 5                           |
| Junior School }        | .                              | .                         | .                           | .                        | .                              | .                  | .                  | 385                         |
| Others                 | .                              | .                         | .                           | .                        | .                              | .                  | .                  | 2550                        |
|                        |                                |                           |                             |                          | .                              | .                  | .                  | 2128                        |
|                        |                                |                           |                             |                          | .                              | .                  | .                  | .                           |
|                        |                                |                           |                             |                          | .                              | .                  | .                  | .                           |

**Table 10 Children born in 1969**

|           | Whooping cough | Diphtheria | Polio-myelitis |
|-----------|----------------|------------|----------------|
| England   | 78             | 80         | 80             |
| Leicester | 71             | 72         | 71             |

The above figures show the percentages of children born during 1969 who have completed a primary course of vaccination at any time.

**Tuberculosis . B C G vaccinations in 1971****Table 11 B C G vaccinations of 13 year old pupils**

|  |               |
|--|---------------|
| Number of pupils tested  | 3350          |
| Number of pupils who attended for reading  | 3149          |
| Number of pupils found to be negative  | 2277 = 85.15% |
| Number of pupils found to be positive  | 397 = 14.85%  |
| Number of pupils found to be positive, previously vaccinated                           | 475           |
| Number of pupils vaccinated  | 2249          |
| Number of pupils found to be negative not vaccinated due to eczema or other conditions | 28            |

**Table 12 B C G vaccinations of immigrant pupils of all ages**

|  |              |
|--|--------------|
| Number of pupils tested                                      | 1501         |
| Number of pupils who attended for reading                    | 1384         |
| Number of pupils found to be negative                        | 617 = 77.03% |
| Number of pupils found to be positive                        | 184 = 22.97% |
| Number of pupils found to be positive, previously vaccinated | 583          |
| Number of pupils vaccinated                                  | 615          |
| Number of pupils found to be negative, not vaccinated        | 2            |

**Table 13 Post B C G vaccination skin tests**

|  |              |
|--|--------------|
| Number of pupils retested<br>(Pupils found to have no, or very small reaction on inspection following vaccination) | 218          |
| Number of pupils found to be positive  | 105 = 51.98% |
| Number of pupils found to be negative  | 97 = 48.02%  |
| Absentees from reading   | 16           |
| Number of pupils found to be negative, but not re-vaccinated   | 7            |
| Number of pupils re-vaccinated   | 90           |

# Public Health and Food Inspection Department

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Report for the year 1971

G A Hiller, *FRSH, FAPHI*, Chief Public Health Inspector

By the time this Report is presented to the Council I shall have retired after nineteen years as your Chief Public Health Inspector.

During this period a great deal has been done to improve environmental conditions in Leicester, although there is still much to be done and the citizens of this City are beginning to realise the dangers of pollution and to accept the warnings which public health inspectors have been trying for many years to point out. Indeed the whole world is becoming frightened and starting to accept, albeit reluctantly, the fact that humanity is in danger of destroying itself with its own wastes if it does not take control of pollutants and eliminate or, at least, reduce them without further delay.

Many of the largest industrial concerns admit that in the past they have had little regard for the manner in which they dispose of their waste products.

Public health inspectors have a key roll to play in the future in facing the problems of pollution, as they are the only local authority officers who see the problem as a whole and its effects on the environment. The re-organisation of local government should be much more effective in this field of activity as the resources of the new district councils will be greater as regards both money and manpower. It is most gratifying that all the functions of the public health inspectorate are to remain with district councils apart from food sampling for quality control and labelling.

During the past nineteen years some ten thousand unfit houses have been dealt with in clearance areas, most of which have already been pulled down and members of the Council can look with pride at the re-development of such areas as St. Matthews (Wharf Street), St. Andrews (Havelock Street, New Bridge Street), St. Peters and Highfields North (Upper Conduit Street) and envisage with satisfaction future schemes involving West End, Charnwood and Morton Road. The proposed extension of the Royal Infirmary and the establishment of a Medical School in conjunction

with the University of Leicester has been greatly facilitated by clearance of unfit housing in the Walnut Street area.

The Council's Slum Clearance Programme will be completed in 1975, although of course there will be small areas of unfit housing demanding attention from time to time.

The emphasis from now on must be in the improvement of houses and their environment and it is my fervent hope that there will always be a place for the public health inspectorate in this field. It should not be forgotten that they did their utmost to make the Housing Act 1964 work despite its shortcomings and selected the districts containing the houses meriting improvement. A report on this subject was approved by the Council in 1966.

For a year or two now the Annual Report has included particulars of a dramatic reduction in smoke pollution and ground level sulphur concentration from industrial, commercial and domestic sources. The smoke control areas programme will be completed in 1975 and the whole city will be covered. The firm line which the Health Committee has always taken in securing adequate heights of all new chimneys for all boiler plant other than the smallest installations has made a marked contribution to the reduction of sulphur compounds in the air.

Over the years following the last war high standards have been achieved in the field of food inspection and food hygiene and the citizens of Leicester can be assured that in this respect they are as well served as any town or city in Europe despite the irresponsible and alarming comparisons which are sometimes made.

The re-organisation of local government with fewer units of administration will no doubt be followed by internal re-organisation. After forty-six years' service including 27 years as a Chief Public Health Inspector in all-purpose authorities, I am convinced that if the best interests of the people of Leicester are to be served, the entity of the Department must be preserved. The position of the Chief Public Health Inspector must be such that he will always

have the right to bring to the notice of the Council any matters of special importance in the interests of environmental hygiene however inconvenient that may be. Further all the citizens of the City, particularly householders, must always have access to an officer and department to whom complaint of any appropriate nature can be made.

Finally I would like to thank all members of the Council and their Chief Officers for their courtesy and help over the years. Particularly I would like to thank Dr. Moss and all my own staff for their unfailing support. I like to feel that I am leaving a happy department and at the same time an efficient one.

I congratulate Mr. C. W. Stacey on his appointment as my successor and wish him well.

#### *Unfit houses—Clearance Areas*

During the year 18 clearance areas were reported to the Council through the appropriate Committee. This involved 611 houses.

#### *Repair and Maintenance*

Prior to the Housing Act 1969 there had for a long time been a general criticism that controlled rents were too low to allow owners to adequately maintain their properties. It seems difficult to understand that whilst many owners have taken advantage of the Housing Act 1969 to obtain increased rents where a controlled tenancy house is in good repair having regard to age, character, locality, and has improved amenities (bath, wash-hand basin, sink, hot water supply and internal water closet), that all owners who are entitled to apply for this rent increase have not yet done so.

The following table indicates the action that has been taken in respect of the issue of Qualification Certificates to landlords to increase their rents.

#### **Housing Act 1969**

|  |     |
|--|-----|
| <i>Applications for qualification certificates</i> |     |
| Houses where improvements required                 | 104 |
| Certificates of provisional approval issued        | 97  |
| Qualification certificates issued                  | 28  |
| Houses where amenities already provided            | 173 |
| Qualification certificates issued                  | 121 |

#### *House Improvement*

When the Housing Act 1969 became law it had been estimated that there were 14,000 houses in Leicester which lacked one or more of the basic amenities, viz: bath, wash-hand basin, hot water system and internal water closet.

The Housing Act 1969 based improvement proposals on a much improved grant scheme and a policy of persuasion and co-operation with landlords, tenants and owner occupiers, although the rights of tenants to demand house improvement is continued. For the first time environmental uplift was provided for in the declaration of general improvement areas.

The Chief Public Health Inspector designates and surveys areas suitable for improvement, the City Planning Officer deals with environmental matters and the Housing Manager is responsible for improvement grants.

The first General Improvement Area containing over 1,700 houses was accepted by the Council in January 1971. In this area 850 houses lacked one or more of the standard amenities, 315 of this total lacked only inside toilets. As the result of a big publicity drive, including an individual approach to all owners and tenants by the Health Department, 193 grant applications had been received by the Housing Manager at the end of the year. This figure can be considered satisfactory when it is realised that a substantial number of householders are elderly and are hesitant about improvements on account of the upheaval in their homes. However,

it is confidently expected that as houses become modernised many persons who are not interested at the moment will eventually become so. Further, as houses are vacated improvements will certainly follow.

The Department is negotiating with landlords in respect of 161 dwellings where tenants have asked for improvements. In the last resort the Health Committee can deal with any of these owners who do not co-operate under Section 19 of the Housing Act 1964.

Including the Clarendon Park General Improvement Area, a total of 4,395 houses lacking one or more of the standard amenities have been surveyed during the year and the advantages of house improvement brought individually to the notice of owners and tenants. At the end of the year there had been grant applications in respect of approximately 10% of these houses.

The following table indicates the work that was carried out under Section 19 of the Housing Act 1964, which enables tenants to ask for statutory action to have their houses improved. Owners have the right to ask the Council to purchase these houses if they do not wish to carry out the improvements. From the table it will be seen that seven such houses were purchased during the year. In addition, two houses were improved by the Department in the default of the owner.

#### **Housing Act 1964—Section 19**

| <i>Compulsory Improvement of Dwellings to provide Standard Amenities</i> |     |
|--|-----|
| Undertakings given   | 33  |
| Improvement notices served   | 148 |
| Improvement works completed  | 72  |
| Improvement works completed in default                                   | 2   |
| Purchase of houses   | 7   |

#### *Multiple Occupation*

During the year continuous action was taken under the Housing Acts 1961-64 to improve conditions in houses in multi-occupation.

Statutory notices for the improvement of management conditions, provision of amenities and fire escapes were served in respect of 263 houses. Legal action for non-compliance with these requirements was taken in relation to five houses. A landlord was fined £50 for an offence under the Housing (Management of Houses in Multi-Occupation) Regulations, 1962. A landlord and wife were fined £15 each under the Housing Act, 1961, for allowing more than the maximum number to occupy their boarding house. Fines of £10 each were imposed on two landlords for failing to comply with undertakings not to let parts of houses where means of escape in case of fire were required. Another person was fined £50 for non-compliance with a notice requiring means of escape in case of fire.

#### *Certificates of availability of accommodation*

For some time a public health inspector has been responsible for the inspection of houses for the purpose of stating whether there is sufficient accommodation for the relatives of immigrants to reside with them. The Health Department insists on documentary evidence being produced that this service is required and such evidence comes from various sources, e.g. British and Indian High Commissioners, Home Office, and Immigrant Advisory Centre.

#### *Animals in houses in multiple occupation*

An increase in the number of complaints regarding the keeping of dogs and cats in houses in multi-occupation was noticed during the year. The complaints come from the owners of the houses in question as well as the occupants of the houses.

With regard to the keeping of dogs, the cause of complaint was excessive noise and the fouling of yards and

common parts of the house. In the case of cats the usual complaint was the number of animals kept. In one instance 8 cats were left all day in a first floor flat and in another an elderly gentleman kept 27 cats in his single bed sitter. This type of accommodation can lead to problems in the keeping of domestic pets such as dogs and cats, particularly if they are left for long periods, but all complaints brought to the department were satisfactorily resolved.

#### *Fire escapes and undertakings*

An amendment to the Building Regulations 1965 has resulted in the specification for external fire escapes being revised. As from 1st November 1970, such erection has to be constructed in non-combustible materials. In most cases the use of metal is required and considerably increases the cost of fire escapes and has resulted in more owners of houses in multiple occupation negotiating with their neighbours to provide internal means of escape. It was anticipated that as a result of these more stringent requirements the number of Undertakings given by owners to vacate rooms so that means of escape in case of fire would not be necessary, would increase. As the following yearly figures show, this was not the case.

1968 (15) 1969 (64) 1970 (59) 1971 (38)

#### *Highfields Area*

During the year in conjunction with other Departments, increased attention was given to the problems of the Highfields area of the city. In an endeavour to improve conditions in this area and to control multi-occupation over the whole city, a registration scheme was prepared for implementation on April 1st 1972. This will give more power to control the spread of multi-occupation and the over occupation of existing houses. The appointment of an additional specialist public health inspector and technical assistant was approved to help with this Scheme.

The area was also surveyed with a fresh approach to owner/occupiers and tenants about the improvement of houses.

Accumulations of refuse, a considerable problem in this area, were dealt with in co-operation with the City Engineer. Yards and vacant sites have been cleared of material and household refuse, some on more than one occasion. This is a problem which needs constant attention.

#### **Multiple occupation**

|   |     |
|---|-----|
| Number of notices served                    | 404 |
| Number of properties involved               | 263 |
| <i>The following improvements were made</i> |     |
| Ventilated food stores                      | 125 |
| Improved ventilation                        | 127 |
| Hot/cold water supply                       | 110 |
| Bath/showers                                | 124 |
| Additional sinks                            | 98  |
| Artificial lighting points                  | 47  |
| Additional space heaters                    | 5   |
| Fire escapes/smoke stop arrangements        | 190 |
| Additional cookers                          | 96  |
| Intervening ventilated space                | 15  |
| Additional water closets                    | 3   |

In addition, 38 Undertakings were accepted not to use parts of houses in multiple occupation for human habitation where adequate provision had not been made for means of escape in case of fire.

#### **New House Building in Leicester**

|                         | 1971 | 1970 | 1969 | 1968 | 1967 |
|-------------------------|------|------|------|------|------|
| By Housing Committee    | 481  | 287  | 202  | 555  | 491  |
| By Private Builders     | 376  | 535  | 505  | 455  | 398  |
| By Housing Associations | 57   | —    | —    | —    | —    |
|                         | 914  | 822  | 707  | 1010 | 889  |

Since 1946 the Council has built 18,837 houses and flats.

### *Property enquiries*

6,797 enquiries were answered relating to the expectation of life and outstanding repair notices on dwelling houses which were changing ownership, offered to the Council for advance purchase, or subject of applications for improvement grants.

This is almost one thousand more than last year.

### *Common Lodging House*

The one common lodging house in the City closed during the year when the owners decided to sell the premises.

The building is in a structurally poor condition and it was not considered an economic proposition to convert it into suitable accommodation of modern standards for single homeless men.

There is a need for such accommodation in the City and the Director of Social Services has the matter under consideration.

### **Drainage, sanitation and water supply**

During the year the number of houses lacking a separate internal water supply or a separate water closet was further reduced, viz:

4 houses without an internal water supply

107 houses sharing water closets

These houses were in confirmed clearance areas.

In 228 cases renewal of sanitary appliances or drainage works were carried out in default of the owners. The total cost of these was £1,426.35p.

Two bathroom conversions were carried out in default of the owners at a cost of £558.24p.

### *City Drinking Water*

A total of 129 samples of water for bacteriological examination were taken throughout the year at a large variety of

supply points in the city: these included school kitchens, cafes, day nurseries, food shops, offices, slaughterhouses and stand pipes and drinking fountains in parks.

Eleven samples were found to have a higher bacterial count than expected; as a result of some of these unsatisfactory samples a length of water main was cleansed and sterilised. In all cases after further treatment samples were satisfactory.

### *Swimming Pools*

158 samples of bath water were examined for chlorine content and bacterial count during the year; these samples were taken from 7 Corporation indoor baths, 2 privately owned outdoor pools open to the public, 4 indoor baths, and one outdoor swimming pool at schools. In addition, samples are now being taken from an indoor pool for the use of residents at an hotel.

The samples taken at the Corporation baths were found to be satisfactory at all times.

At the other pools the water was tested at the side of the bath for chlorine content and acidity and if necessary a sample was taken to the Public Analyst for bacteriological examination. When the chlorine content, acidity or clarity was found to be unsatisfactory, advice was given on the spot and immediate adjustments made.

### **Caravans—itinerants**

The problems arising from itinerants are still with us, although action has been taken mostly by the City Estates Surveyor, as the caravans are usually found on land owned by the Corporation.

The Council has now contracted for the construction of a site for 15 caravans at a cost of £48,103, thus meeting their obligation under the Caravan Site Act 1968. The site should be available in the autumn of 1972.

### Showmen's Guild Site

This site for 30 caravans used during the winter months by members of the Showmen's Guild continues to give no trouble.

### Offices, Shops & Railway Premises Act 1963

#### Registration and Inspection

Inspections under the Act continued at approximately the same rate as in 1970. 186 premises were newly registered and the total number of registered premises is 3,700. A review of the classification of all registered premises was carried out during the year. Three-quarters of the premises registered received at least one general inspection during the year.

467 contraventions of the Act were noted and brought to the attention of occupiers.

|                             |     |
|-----------------------------|-----|
| Cleanliness                 | 24  |
| Temperature                 | 98  |
| Ventilation                 | 9   |
| Lighting                    | 24  |
| Sanitary Conveniences       | 48  |
| Washing Facilities          | 24  |
| Clothing Accommodation      | 1   |
| Sitting Facilities          | 1   |
| Seats (sedentary workers)   | 2   |
| Floors, passages and stairs | 59  |
| First Aid                   | 177 |
| <br>Total                   | 467 |

The above table with contraventions averaging 0.13 for each general inspection of premises, is an indication that working conditions are generally satisfactory.

#### Accidents

97 accidents were reported during the year, none of which was fatal. A large multiple firm of footwear manufacturers operating the largest warehouse of its type in Europe accounts for a large proportion of these reported accidents. The degree of mechanical handling at this warehouse is very high and the following accident occurred which is of general interest.

An employee was using a pallet truck to tow a line of three wire mesh bins. All the bins were on wheels and the first one had been placed on the forks of the truck where it was being held by friction only. The other bins were connected to it and each other by straps. As the truck was proceeding through the warehouse the first bin came off the forks, whereupon the driver braked sharply.

The driving position is on a spring-loaded platform on the front of the truck and the sudden application of the brakes caused the truck to tip forward on top of the driver who sustained a compound fracture of the right leg. Investigation showed that the centre of gravity of the truck was such as to render it unstable. It was found that the rollers of the forks could be easily made to lose contact with the ground by sudden acceleration of the truck or by sudden application of the brakes.

After representations by the Chief Public Health Inspector to the occupiers of the warehouse and the manufacturers, the truck was modified by extending the forks by 18 ins. to allow space for a driving platform to be fitted between the load and the motor housing. A barrier was fitted to prevent the load moving forward on to the driver. The modification has been successful in making the truck stable.

#### Outworkers

During 1971 outwork in 460 homes in the City was notified to the local authority as required by the Factories Act. Firms employing outworkers are required to send details to the local authority in February and August every year.

| Accidents  | Class of premises | Offices | Retail Shops | Wholesale            | Catering                    | Fuel           | Total |
|--|-------------------|---------|--------------|----------------------|-----------------------------|----------------|-------|
|  |                   |         |              | Shops and Warehouses | Establishments and Canteens | Storage Depots |       |
| Number of accidents reported                     |                   | 8       | 27           | 46                   | 15                          | 1              | 97    |
| Number of accidents investigated                 |                   | 6       | 23           | 23                   | 13                          | 1              | 66    |
| <i>Causation</i>                                 |                   |         |              |                      |                             |                |       |
| Machinery  | .                 | 1       | .            | 1                    | .                           | .              | 2     |
| Transport  | .                 | .       | 4            | .                    | .                           | .              | 4     |
| Falls of persons                                 | 5                 | 8       | 15           | 5                    | .                           | .              | 33    |
| Stepping on or striking against object or person | .                 | 1       | 8            | 2                    | .                           | .              | 11    |
| Handling goods                                   | 1                 | 4       | 8            | 3                    | 1                           | .              | 17    |
| Struck by falling object                         | 1                 | 7       | 8            | 1                    | .                           | .              | 17    |
| Fires and explosions                             | .                 | .       | .            | .                    | .                           | .              | .     |
| Electricity                                      | .                 | .       | .            | .                    | .                           | .              | .     |
| Use of hand tools                                | .                 | 3       | .            | .                    | .                           | .              | 3     |
| Not otherwise specified                          | 1                 | 3       | 3            | 3                    | .                           | .              | 10    |
| <i>Injuries sustained</i>                        |                   |         |              |                      |                             |                |       |
| Fractures and dislocations                       | .                 | 3       | 6            | 1                    | .                           | .              | 10    |
| Sprains and strains                              | 3                 | 4       | 16           | 4                    | 1                           | 28             |       |
| Open wounds/surface injury                       | 1                 | 12      | 5            | 4                    | .                           | .              | 22    |
| Bruising and crushing                            | 4                 | 7       | 18           | 4                    | .                           | .              | 33    |
| Burns  | .                 | .       | .            | 2                    | .                           | .              | 2     |
| Multiple injuries                                | .                 | .       | 1            | .                    | .                           | .              | 1     |
| Foreign body in orifice                          | .                 | 1       | .            | .                    | .                           | .              | 1     |
| <i>Action taken</i>                              |                   |         |              |                      |                             |                |       |
| Prosecutions                                     | .                 | .       | .            | .                    | .                           | .              | .     |
| Formal warnings                                  | .                 | .       | .            | .                    | .                           | .              | .     |
| Informal advice                                  | 7                 | 22      | 24           | 13                   | 1                           | 67             |       |
| None   | 1                 | 5       | 22           | 2                    | .                           | .              | 30    |

## **Environment Pollution**

### *Domestic Smoke Control*

The Smoke Control programme received a further setback as a result of objections to Nos. 28 and 29 Smoke Control Orders.

Four objections were lodged with the Department of the Environment in respect of No. 28 Order and one in respect of No. 29 Order. All the objectors were visited by the Divisional Public Health Inspector in an attempt to resolve the difficulties informally. While he was courteously received in each instance, each of the persons interviewed declined to withdraw and the matter had to be resolved by a Public Inquiry. This was held in the Town Hall on 10th August 1971. Only one of the objectors appeared to give evidence. One other was represented by a friend who was allowed to give evidence on her behalf. The matters raised by the objectors were concerned with shortage of fuel, disturbance caused by works of adaptation, alleged health hazards resulting from the burning of smokeless fuels, unnecessary expense incurred by conversion and deferment of the Smoke Control programme.

One member of the public who attended as an interested party was allowed to make a statement. In it he said that he had seen democracy in action by the holding of the Inquiry to hear the objections of only 4 people. He commented that it was remarkable what progress could be held back because of the people. He expressed concern that the Council were obliged to delay the operation of the Order until 1972. The Inspector reported in favour of the Orders being upheld and they were confirmed on 24th November 1971, to become operative on 1st July 1972. This represents a delay of 7 months in the scheduled programme, but it is hoped that subsequent Orders will proceed as scheduled, in which case the target date for completion by 1975 will still be met.

The supply position for solid smokeless fuels is much improved since last year and ample supplies are now

available. The Rexco plant at Coalville is in production and consolidates the situation as far as Leicester is concerned.

### *Industrial Smoke*

568 observations were carried out on industrial premises and 33 statutory notifications of smoke offences under the Dark Smoke (Permitted Periods) Regulations 1958 and the Clean Air Act 1968 were served. In addition, 133 informal notifications were given.

Once again, industrial bonfires feature prominently in the statutory smoke offences. 81 such fires were observed and of the statutory notifications for smoke offences 21 were in respect of dark smoke from such bonfires.

The practice of burning out houses in clearance areas by demolition contractors has given particular cause for concern. On one occasion 27 burning houses on the Charnwood demolition site were observed by the Chief Public Health Inspector and the Chief Fire Officer, giving rise to serious low level smoke pollution.

In co-operation with the City Engineer a letter was circulated to all demolition contractors informing them that this practice would render them liable to prosecution under the Clean Air Acts.

4 successful prosecutions were heard during the year. 2 were in respect of dark smoke from a scrap dealers premises and 2 in respect of dark smoke from demolition sites. Fines totalling £175 were imposed.

### *New Furnace Installations*

73 applications for approval of chimney heights were received. These involved the installation of 93 furnaces. 39 of the applications were in respect of gas fired installations, 31 in respect of oil fired and there were 3 incinerators. It is notable that for the first time in many years no new coal fired plant was installed. This is mainly attributable to the advent of natural gas which, because of its ease of handling and its suitability for completely automatic firing,

has many attractions for industrialists. It is also, of course, a very clean smokeless fuel.

#### *Grit and Dust*

Eleven complaints of grit emission involving 5 premises were received. In one instance a serious grit nuisance from a large coal fired steam raising plant was abated when the plant was converted to gas firing.

#### *Fumes and Vapour*

An incident involving plant damage in Repton Street and on the Groby Road Allotments focussed attention on the widespread effects on the local environment of industrial emissions.

The plants affected exhibited abnormalities similar to those which result from the application of hormone type weed killer. After a prolonged and intensive investigation it appears that emissions of fume and vapour from the textile dyeing and finishing industry could cause similar damage, but the evidence so far is not conclusive.

The situation is being kept under very close surveillance and the dyeing industry have been requested to co-operate by examining the possible effects on the environment of all of the chemicals used by them.

#### **Noise**

115 complaints of noise were received. These involved 102 premises and upon investigation 35 were found to be justified. 3 statutory notices were served under the Noise Abatement Act 1960 and the remainder of the complaints were dealt with informally.

The problem of noise is one which is receiving a great deal of attention at present. Background noise levels are increasing at a rate which is estimated to be such that in

10 years' time they could be twice and possibly four times as loud as they are today.

At present the only legal measures open to the local authority for minimising noise are those contained in the Noise Abatement Act which deals mainly with noise as a nuisance.

If the rate of increase is to be halted, let alone reduced, much wider powers are required. The prevention of noise is a more effective way of dealing with ambient noise levels than the abatement of nuisance. It is also very often easier to achieve.

The Working Group of the Noise Advisory Council issued their Report entitled "Neighbourhood Noise" in October. In it they make a number of recommendations for the prevention of noise, including a new Noise Abatement Act. The Act they envisage would give the local authority powers to impose requirements for the limitations of noise on building and demolition contractors; it would make it an offence to sell machinery which made noise in excess of a specified level; the use of unsilenced road drills and other mobile machinery would be prohibited and there would be a general duty imposed on everyone—owners and occupiers of premises and any person on the premises—to use the best practical means to minimise noise. An entirely new concept of Noise Abatement Zones is proposed. Within these zones local authorities could impose maximum limits for noise emission.

The Report also recommends that planning authorities should consult public health authorities on the noise implications of planning proposals.

In Leicester we already enjoy a degree of liaison with the Planning Department's control section. This has already resulted in noise abatement measures being carried out before premises are occupied.

Not only is nuisance avoided in this way, but it prevents any increase in background noise levels from occurring in the areas concerned.

The following analysis of noise complaints shows the extent of the problem.

|                           |    |
|---------------------------|----|
| General industrial noises | 32 |
| Commercial premises       | 20 |
| Domestic noises           | 44 |
| Roadworks                 | 6  |

#### **Consumer Protection**

During the past year the trend towards 'dead date' coding all perishable food has continued and indeed has speeded up; many of the larger manufacturers now have a simple code which is easy to interpret by the retailer. The 'dead date' is the date after which food should not be sold. In a number of cases manufacturers and even supermarkets have gone a stage further and are printing the actual date on the food after which it should not be sold.

It is surprising, however, that a considerable number of smaller shopkeepers still ignore 'dead dates' or profess no knowledge of them and more education is needed in this direction.

When pre-packed perishable foods are not coded or are packed on the premises, shopkeepers are being persuaded to date or colour code these products to ensure correct rotation; as stated last year, it is not enough just for the fresher products to be placed at the back of self-service shelves in the hope that not so fresh products at the front will be sold first.

#### **Milk and Dairies**

The further reduction in the number of milk samples compared with previous years was again justified, as all samples were found to be satisfactory as regards chemical quality, keeping quality and efficiency of pasteurisation.

In all, 498 samples were taken during the year which included bottled and cartoned, pasteurised, sterilised, Channel Island and Ultra-Heat treated milks.

#### **Food and Drugs**

A total of 1,269 food samples were taken during the year of which 90 or approximately 7% were unsatisfactory; these samples were taken from a wide range of types and brands of food. New products are looked for continually and promptly sampled.

67 samples of drugs were taken of which 6 were found to be unsatisfactory.

In the case of unsatisfactory samples, full investigations are made with the manufacturer, importer, packer or retailer and continued until satisfactory explanations are received and assurances given that the products in future will comply with labelling and compositional requirements. One prosecution for sausages deficient in meat content was taken in the Magistrates Court and was successful.

#### **Trades Description Act 1968**

A successful prosecution was taken under the Trades Description Act 1968 in co-operation with the Public Protection Department; the case was against a large fish wholesaler outside the City and was in regard to coalfish fillets being sold as haddock fillets.

The fish had been supplied under contract to an Old People's Home in Leicester, but as the sale had taken place outside the City, action could not be taken under the Food and Drugs Act 1955.

Full details of satisfactory and unsatisfactory samples appear in the City Analyst's section of this report.

The number of complaints brought to the department regarding unsatisfactory foods has again increased and the total of 308 in 1971 was approximately three times the figure of four years ago.

In 8 cases the complaints were sufficiently serious as to justify legal proceedings and the following successful prosecutions were taken:

1. Mouse dropping in trifle
2. Metal in sweet lollipop
3. Mouldy fresh cream dessert
4. Metal in pork pie
5. Mouldy sausage rolls
6. Decomposed chicken piece
7. Mouldy chocolate eclair
8. Mouldy steak and kidney pie

The increase in the number of complaints is not so much an indication of more purchases of food being unsatisfactory, but is rather due to the greater vigilance of the consumer and increased concern that all foods offered for sale shall be wholesome and of the quality demanded. People are becoming more appreciative of the valuable work done by public health inspectors in dealing with the wide range of irregularities that can occur in food stuffs offered for sale.

All substantiated complaints are investigated, starting at the point of sale and going back to the manufacturer if necessary. Some of these investigations take a long time to complete.

#### Details of Food Complaints

|                       |     |
|-----------------------|-----|
| Bread                 | 51  |
| Flour confectionery   | 30  |
| Milk                  | 24  |
| Meat pies and pasties | 19  |
| Fish                  | 19  |
| Cooked meats          | 16  |
| Meat                  | 15  |
| Canned fruits         | 14  |
| Canned vegetables     | 13  |
| Cheese                | 12  |
| Canned meats          | 7   |
| Sausages              | 6   |
| Potato crisps         | 6   |
| Fresh fruit           | 4   |
| Butter                | 4   |
| Other foods           | 68  |
| Total                 | 308 |

#### *Slaughter of Poultry*

Visits are made by public health inspectors to the two premises where poultry are slaughtered daily. Approximately 400,000 birds were dealt with during the year, mostly hens and chickens sold fresh and uneviscerated. Less than 0.5% were rejected as unfit mainly for emaciation and deformities. These are rejected by experienced staff and doubtful cases are left for the daily visit of the public health inspector.

In eleven butchers' shops about 1,200 poultry are slaughtered each week for the Muslim community. Control of hygiene is difficult in these shop dwellings; regular weekly visits are made and as often as possible when slaughtering is in progress. All such premises are required to keep a separate room for the exclusive purpose of slaughtering.

A successful prosecution was taken against an Asian poultry slaughterer for 12 contraventions of the Food Hygiene (General) Regulations 1970. Fines of £120 were imposed.

Joint visits with the District Veterinary Officer of the Ministry of Agriculture, Fisheries and Food were made during the year to secure compliance with the Slaughter of Poultry (Humane Conditions) Regulations 1971.

#### **Meat inspection**

##### *Slaughtering*

There are four licensed slaughterhouses at the Cattle Market at which slaughtering is limited to the periods 7 a.m. to 7 p.m. on Mondays to Fridays, and 7 a.m. to 1 p.m. on Saturdays. There is one licensed slaughterhouse on the Thurmaston side of the City at which killing is permitted up to 8 p.m. on one evening each week.

A 100% inspection was carried out in accordance with the provisions of the Meat Inspection Regulations on the 172,121 animals which were slaughtered and 53 tons of meat and offal were found to be unfit for human consumption.



*Public Health Inspector inspecting poultry*

### *Meat Inspection Standards*

Towards the end of the year a statement was made at a Press Conference called by the British Veterinary Association that British people ran a greater risk of food poisoning than consumers in E.E.C. countries, because of the low standard of meat inspection in abattoirs in this country.

In the sensitive field of public opinion concerning food, a highly contentious statement such as this was given immediate and widespread publicity by the press, radio and television services. The reaction to the allegation from responsible organisations such as the Ministry of Agriculture, the National Farmers Union and the Association of Public Health Inspectors was also immediate and condemnatory. In the House of Commons the Minister of Agriculture in reply to a question agreed that the standards of meat inspection carried out by health inspectors in this country was as good as, if not better than, those on the Continent and that the job done by the public health inspectorate was absolutely first class.

The B.B.C. through the local station, Radio Leicester, broadcast an interview with the President of the British Veterinary Association on the subject of meat inspection and Mr. John Morris, Divisional Public Health Inspector, was invited to reply and to reassure the public that there was not one scrap of evidence to support the somewhat alarming allegation that had been made.

Thanks must be expressed to Radio Leicester for the opportunity given to the Department to allay any fears that there might have been in the minds of consumers.

### *Imported Meat*

During the year 294 containers of imported meat were examined in accordance with the provisions of the Imported Food Regulations 1968. The total weight of imported meat and offal found to be unfit for human consumption was nearly 3 tons.

### *Meat Hygiene*

Advances in meat hygiene are a continuing process and a high standard of hygiene is maintained at the slaughterhouses in the city. Tribute must be paid to the meat trade for their responsible attitude towards the maintenance of this high standard.

The installation of new equipment to improve standards in slaughterhouses is invariably very costly and the ready co-operation of the meat trade in adopting new techniques to keep abreast of advances in meat hygiene must be acknowledged. The need for the highest standards in the handling of meat extends beyond the slaughterhouse to the delivery vehicles, meat processing plants, retail shops and in the kitchen and it is in this field that the education of persons engaged in the distribution and preparation of meat is most important.

### *Education Facilities*

The addition of a lecture room to the Meat Inspector's Office at the Cattle Market has improved greatly the facilities for lectures and demonstrations to students. During the year 160 students attended such lectures.

Anatomical specimens were supplied to the University, Colleges and Schools for research and instructional purposes.

### *Contract Food Supplies*

During the year 132 visits were made to schools, colleges and other establishments within the city in connection with meat supplies. Apart from minor discrepancies the meat supplied was in accordance with the conditions of the contracts.

In addition fish supplied on contract to premises controlled by the Education and Social Services Departments was regularly inspected. A small number of consignments were condemned as unfit and in some cases the fish supplied was not as the contract and invoices stated. These

irregularities were brought to the attention of the Central Purchasing Department and as stated elsewhere in this Report, legal proceedings were taken in respect of one consignment.

## Food

### *Food Hygiene*

There are 3,001 premises in the City which are subject to the Food Hygiene (General) Regulations 1970 and for which inspection targets have been laid down and approved by the Health Committee. The targets for premises where food is handled vary with the risk involved. For example, the aim is to inspect grocers twice, while cafes and restaurants receive a quarterly visit. It is considered that this is the minimum number of visits required and obviously some premises need more. It was possible during the year to meet these targets.

### *Shops*

Very little unwrapped food is now on display in grocers, bakers and confectionery shops. Problems remain in the butchery trade, particularly with the need to separate raw meat from cooked meat, the use of separate utensils for this purpose and greater care in poultry preparation.

In general in the retail food trade standards have improved tremendously since the Food Hygiene (General) Regulations came into force in 1955. Some unsatisfactory practices and habits, however, remain. Examples of these are:

- 1 the handling of cooked food instead of using tongs or paper.
- 2 the display of raw and cooked foods in close proximity to each other.
- 3 the over ordering of perishable foods such as meat pies and similar products which have a considerable food

poisoning risk and the frequent absence of refrigerated displays.

It is unfortunate that more customers do not complain when they notice practices which are obviously unsatisfactory.

Legal proceedings were taken against a national company operating a large chain of supermarkets. The dirty condition of the premises and equipment resulted in fines of £200.

### *Restaurants*

The number of restaurants and eating places continues to increase. More firms are opening chains of restaurants of a standard design throughout the country and these do not generally present many problems. Staff of the right type and calibre are difficult to obtain and consequently supervision of kitchen hygiene continues to require constant attention by public health inspectors.

During the year architects and owners continued to consult the Department on the construction of new premises and the alteration of others. The advice given at the planning stage ensured that the premises complied with food hygiene requirements when business commenced.

### *Mobile Food Shops*

There are 125 mobile food shops registered by the Leicester Corporation Act 1968. Regular inspections are made for compliance with the Food Hygiene (Markets, Stalls and Delivery Vehicles), Regulations 1966, and enforcement is made easier by registration.

The control of vehicles selling hot dogs late in the evening in the City centre, at football matches and outside other places of entertainment necessitated inspections outside normal working hours. Two successful prosecutions for unsatisfactory vehicles were taken resulting in a total of £108 in fines.

## Food Hygiene (General) Regulations 1970

| Premises covered by the Regulations                 |      |
|---|------|
| Grocers and supermarkets                            | 761  |
| Licensed premises                                   | 197  |
| Butchers shops                                      | 264  |
| Fruiterers and greengrocers shops                   | 130  |
| Fishmongers and fried fish shops                    | 111  |
| Bakeries  | 22   |
| Confectioners shops                                 | 331  |
| Hotels, restaurants and cafes                       | 445  |
| Factory canteens, school meals preparation kitchens | 704  |
| Food warehouses and factories                       | 36   |
| Total   | 3001 |

### Health Education

The continuing demand for lectures and demonstrations to school children and to students undertaking further education courses has been encouraging. A most valuable contribution has been made in the environmental hygiene studies of fifth and sixth formers undertaking human biology and some economics courses. The practical emphasis resulting from the public health inspectors' presentation of such subjects as housing, air pollution, water supply, sewage and refuse disposal, food contamination and food inspection and hygiene has proved highly successful. The resultant awareness of an inter-action between the many facets of environmental hygiene has proved beneficial and has been appreciated by teachers.

The developing work with examination classes is most pleasing. No less gratifying, however, have been the talks given to pupils in Junior Schools. To see 10 and 11 year olds showing an awareness of the need for a healthy environment is indeed rewarding. Similarly, it has been encouraging to note the interest taken in environmental studies by teenagers who were not preparing for examinations.

The Department's growing library of 35 m.m. slides is invaluable in enlivening otherwise technically difficult subjects. Slide series comprising the library include the

many aspects of food spoilage and safety, housing, water, refuse, sewage, air pollution (global and local), insect pests and aspects of the Offices, Shops and Railway Premises Acts. The cartoon presentation of some accidents which occur in places of work has proved helpful when speaking to employees.

A large proportion of the slides has been prepared within the Department and it is expected that the library will be further enlarged to meet future health education needs. In addition, a collection of specialised colour slides has been built up for use by the meat inspection section. These photographs depict a comprehensive range of diseased and abnormal conditions of meat and are of great assistance, particularly in the training of student public health inspectors.

It is regretted that there were insufficient students to support the Course in the Hygiene of Food Retailing and Catering at South Fields College during the 1971-72 session.

It is pleasing to report a 100% success rate in the previous year's Royal Society of Health examination in this subject.

It is expected that the Course will be revived in the next College session.

### Pest control

3,208 complaints of rats and mice were dealt with during the year by the Pest Control Officer and his staff. In addition routine control was carried out at all agricultural holdings, including allotments and along water courses.

Private dwelling houses are treated without charge for rats, but in the case of mice a standing charge is made, with exceptions for old people and in cases of hardship. Economical charges are made for the treatment of business premises.

During the year the local authority was represented by the Deputy Chief Public Health Inspector on the S.E. Leicestershire Rat Control Committee and three meetings were



*Public Health Inspector teaching Food Hygiene to College Students*

attended. Useful discussions took place at this Committee with representatives of other local authorities in Leicestershire, the Ministry of Agriculture, Fisheries and Food and the National Farmers' Union.

Some difficulties were encountered with mice on premises, such as warehouses and food premises when the ambient temperature is regularly above 65° F and where there was a good supply of food for the mice.

Under these conditions alpha-chloralose, the poison bait which is in regular use is not entirely satisfactory as the action depends on the loss of body heat by the mice. Pre-baiting and warfarin as an alternative poison have been tried with some success. There is, however, evidence of increased resistance of mice to anti-coagulant rodenticides with the result that the number of premises infested by mice has increased in recent years.

#### *Insect Control*

772 complaints were received during the year. A charge was made for the treatments with the exception of those in which old people were involved and those which concerned cases of hardship.

During the year the Department co-operated with a well known national firm of pesticide manufacturers in field trials of a new cockroach insecticide. These were successful and the product is now on the market.

#### *Control of feral pigeons*

Nuisance from feral pigeons was again evident during the year. 668 pigeons were destroyed by using alpha-chloralose as a narcotic and then gassing the doped birds within the fumes of carbon tetrachloride. This method is approved by the Ministry of Agriculture, Fisheries and Food and two of the Department's operators hold licences for this work.

| Legal Proceedings   |  | Fine   |
|---|--|--------|
| Statutes under which proceedings instituted                   | Default or offence                                     | £      |
| Food and Drugs Act 1955, Section 2                            |  |        |
| " " " "   | Mouse droppings in trifle                              | 25.00  |
| " " " "   | Sausages deficient in meat content                     | 50.00  |
| " " " "   | Metal in pork pie                                      | 50.00  |
| " " " "   | Metal in lollipop                                      | 20.00  |
| " " " "   | Mouldy Cream Dessert                                   | 50.00  |
| " " " "   | Mouldy chocolate eclair                                | 25.00  |
| " " " "   | Mouldy steak & kidney Pie                              | 80.00  |
| " " " "   | Mouldy Sausage Rolls                                   | 60.00  |
| " " " "   | Unfit Chicken (decomposed)                             | 50.00  |
| Food Hygiene (Gen.) Regs. 1970                                | 12 Contraventions                                      | 120.00 |
| " "   | 25 Contraventions                                      | 200.00 |
| Food Hygiene (Markets, Stalls & Delivery Vehicles) Regs. 1966 | Smoking whilst handling food                           | 5.00   |
| " " " " " "   | " " " "  | 5.00   |
| " " " " " "   | " " " "  | 10.00  |
| " " " " " "   | " " " "  | 35.00  |
| " " " " " "   | Dirty condition of hot dog vehicles                    | 108.00 |
| Trades Description Act 1968                                   | Wrongful labelling of food                             | 20.00  |
| Housing Act 1961  | Contravention of undertaking not to let parts of house | 10.00  |
| " "   | " " " " " "  | 10.00  |
| " "   | No means of escape in case of fire                     | 50.00  |
| " "   | Non-compliance of Management Order                     | 50.00  |
| " "   | Overcrowding   | 30.00  |
| Clean Air Act 1968  | Emitting dark smoke                                    | 40.00  |
| " "   | " " "  | 75.00  |
| " "   | " " "  | 40.00  |
| " "   | " " "  | 20.00  |

### Lectures 1971

| Students   | No. of lectures | Total students attending |
|--|-----------------|--------------------------|
| <b>Lectures on employers' premises</b>   |                 |                          |
| Catering personnel   | 21              | 114                      |
| Other food personnel   | 3               | 170                      |
| Others   | 5               | 51                       |
| <b>Lectures &amp; Demonstrations to students undertaking further education</b> |                 |                          |
| Butchery personnel   | 6               | 28                       |
| Other food personnel   | 20              | 200                      |
| Students other than food handlers  | 34              | 721                      |
| <b>Professional trainees</b>   |                 |                          |
| Student nurses   | 15              | 144                      |
| Student district nurses  | 2               | 24                       |
| Student health visitors  | 4               | 100                      |
| Others   | 34              | 364                      |
| <b>Lectures &amp; Demonstrations to School Pupils</b>                          |                 |                          |
| G.C.E, O & A level & C.S.E. Courses  | 42              | 705                      |
| Others   | 15              | 333                      |
| <b>Professional meetings and other outside organisations</b>                   |                 |                          |
|  | 17              | 716                      |
| <b>Total</b>   | <b>218</b>      | <b>3670</b>              |

### General Sanitary Circumstances

| Complaints received and recorded        | Housing defects | 1052 |
|---|-----------------|------|
| Blocked and defective drains and sewers | 414             |      |
| Defective water supply                  | 26              |      |
| Flood water in houses                   | 73              |      |
| Overcrowding                            | 28              |      |
| Caravans                                | 9               |      |
| Keeping of animals                      | 29              |      |
| Accumulation of offensive matter        | 323             |      |
| Factory conditions                      | 3               |      |
| Smoke nuisances                         | 107             |      |
| Grit nuisances                          | 11              |      |
| Fumes and steam                         | 36              |      |
| Noise nuisances                         | 123             |      |
| Offensive odours                        | 145             |      |
| Food hygiene regulations                | 29              |      |
| Insects, pests and wasps                | 772             |      |
| Rats and mice                           | 3208            |      |
| Feral pigeons                           | 19              |      |
| Miscellaneous                           | 154             |      |
| <b>Total</b>                            | <b>6561</b>     |      |

**Housing: Clearance areas reported to the Council through the Housing Committee**

| Area No.      | Name                     | C O or C P O | No. of Houses | Other buildings |
|---------------|--------------------------|--------------|---------------|-----------------|
| 405           | Gt. Holme Street No. 3   | C P O        | 322           | .               |
| 406           | Dane Street              | C P O        | 2             | .               |
| 407           | Andrewes Street No. 1    | C P O        | 4             | .               |
| 408           | Andrewes Street No. 2    | C P O        | 11            | .               |
| 409           | Hinckley Road No. 1      | C P O        | 2             | .               |
| 410           | Hinckley Road No. 2      | C P O        | 1             | .               |
| 411           | Hinckley Road No. 3      | C P O        | 1             | .               |
| 412           | Hinckley Road No. 4      | C P O        | 1             | .               |
| 413           | Hinckley Road No. 5      | C P O        | 2             | .               |
| 414           | Hinckley Road No. 6      | C P O        | 1             | .               |
| 416           | Gt. Holme Street No. 4   | C P O        | 1             | .               |
| 417           | Gt. Holme Street No. 5   | C P O        | 5             | .               |
| 418           | Noble Street No. 1       | C P O        | 1             | .               |
| 419           | Noble Street No. 2       | C P O        | 247           | .               |
| 420           | Tudor Road               | C P O        | 1             | .               |
| 421           | Clara Street             | C P O        | 6             | .               |
| 422           | King Richards Road No. 1 | C P O        | 1             | .               |
| 423           | King Richards Road No. 2 | C P O        | 2             | .               |
| <b>Totals</b> |                          | <b>611</b>   | <b>Nil</b>    |                 |

**Slum clearance**

|      |  | Representations<br>C O | Representations<br>C P O | No. of houses<br>in orders | No. of houses<br>Confirmed |
|------|--|------------------------|--------------------------|----------------------------|----------------------------|
| 1953 |  | .                      | 1                        | 270                        | 270                        |
| 1954 |  | .                      | 5                        | 670                        | 664                        |
| 1955 |  | .                      | 6                        | 155                        | 123                        |
| 1956 |  | 14                     | 7                        | 577                        | 282                        |
| 1957 |  | 23                     | 11                       | 1076                       | 534                        |
| 1958 |  | 27                     | 24                       | 769                        | 645                        |
| 1959 |  | 2                      | 11                       | 1104                       | 716                        |
| 1960 |  | 4                      | 19                       | 519                        | 1118                       |
| 1961 |  | 3                      | 4                        | 576                        | 344                        |
| 1962 |  | .                      | 6                        | 240                        | 801                        |
| 1963 |  | 1                      | 3                        | 456                        | 247                        |
| 1964 |  | 1                      | 32                       | 801                        | 54                         |
| 1965 |  | 1                      | 9                        | 954                        | 1061                       |
| 1966 |  | 10                     | 5                        | 452                        | 676                        |
| 1967 |  | 3                      | 5                        | 239                        | 579                        |
| 1968 |  | 5                      | 22                       | 518                        | 277                        |
| 1969 |  | 4                      | 6                        | 274                        | 731                        |
| 1970 |  | 2                      | 14                       | 478                        | 365                        |
| 1971 |  | .                      | 18                       | 611                        | 642                        |
|      |  | <b>100</b>             | <b>208</b>               | <b>10739</b>               | <b>10129</b>               |

Area 415 – Leamington Street – withdrawn

Area 396 – The Green – withdrawn – A.R. 1970.

4 individual houses have been represented for demolition

**Unfit houses dealt with individually**

**Individual unfit houses 1953-1971**

| Act under which action taken                          | Houses represented to Health Committee | Houses on which Order made | Statutory U/T not to re-let | Houses vacated | Awaiting removal |
|---|--|----------------------------|-----------------------------|----------------|------------------|
| <i>Housing Act 1957, Sect. 17 – demolition orders</i> | 393                                    | 361                        | 25                          | 389            | 4                |
| <i>Housing Act 1957, Sect. 17 – closing orders</i>    | 80                                     | 80                         | .                           | 79             | 1                |
| <i>Housing Financial Provisions Act, 1958</i>         | 102                                    | 102                        | .                           | 102            | .                |
| <i>Voluntary undertakings</i>                         | .                                      | .                          | 24                          | 24             | .                |
| <i>Housing Act 1957 – closure of rooms</i>            | 8                                      | 8                          | .                           | .              | .                |

| <b>Synopsis of inspection work</b>                                   | <b>Inspections</b> |   | <b>b/f 53207</b> |
|--|--------------------|---|------------------|
|  | <i>Housing:</i>    |   |                  |
| <i>Defects under Public Health Acts</i>                              | 4785               | Poultry processing premises   | 438              |
| <i>Under Housing Acts: Inspections</i>                               | 5008               | Hotel and restaurant kitchens   | 1395             |
| Overcrowding   | 29                 | Public houses and clubs   | 517              |
| Improvement  | 7583               | Factory canteens  | 1308             |
| Land charge visits   | 1004               | <i>Markets: Retail</i>  | 675              |
| Houses in multiple occupation  | 4063               | Wholesale   | 592              |
| <i>Rent Act 1957: Certificate of disrepair</i>                       | 13                 | Cold stores   | 954              |
| <i>Drainage: Tests and inspections</i>                               | 4504               | Dairies   | 237              |
| <i>Infectious disease: Enquiries and disinfection</i>                | 345                | Food vending machines   | 5                |
| <i>Infestation control: Rodent, insect and pigeon control</i>        | 1755               | <i>Merchandise Marks Act</i>  | 450              |
| <i>Complaints (Nuisances): Ditches and watercourses</i>              | 62                 | <i>Sampling Visits: food, drugs, water, fertilisers and feeding stuffs, rag flock, swimming baths</i> | 2097             |
| Flooding   | 443                | <i>Food Inspection Complaints</i>   | 370              |
| Keeping of animals   | 196                | Unfit food  | 1304             |
| Offensive accumulations  | 2188               | <i>Other Registered and Licensed Premises:</i>  |                  |
| Offensive odours   | 543                | <i>Animal Establishments</i>  | 133              |
| Refuse tips  | 27                 | <i>Knackers' yards</i>  | 10               |
| Factories  | 132                | <i>Offensive Trades</i>   | 60               |
| <i>Offices, Shops and Railway Premises Act, 1963</i>                 | 4310               | <i>Common Lodging House</i>   | 6                |
| <i>Atmospheric Pollution and Noise:</i>                              |                    | <i>Canal Boats</i>  | 3                |
| Furnaces, boilerhouses and chimneys                                  | 1048               | <i>Pharmacy and Poisons Act, 1933</i>   | 24               |
| Smoke, fumes, dust and grit  | 1066               | <i>Hairdressers' premises</i>   | 248              |
| Smoke control areas  | 8895               | <i>Van dwellings</i>  | 102              |
| Noise  | 1072               | <i>Meetings with Owners and Tradesmen</i>   | 3378             |
| <i>Food Hygiene:</i>   |                    | <i>Health Education: Lectures etc.</i>  | 281              |
| <i>Shops: Meat, fish, fruiterers and greengrocers, confectioners</i> | 3193               | <i>Other Visits</i>   | 504              |
| Bakehouses   | 102                |   |                  |
| Fish frying premises   | 151                |   |                  |
| Food manufacturing premises  | 231                |   |                  |
| Food vendors' vehicles   | 290                |   |                  |
| Food warehouses  | 128                |   |                  |
| Ice cream premises   | 41                 |   |                  |
|  |                    | <b>Total</b>  | <b>68298</b>     |
|  |                    | <i>Notices served</i>   |                  |
|  |                    | Informal  | 1557             |
|  |                    | Formal  | 1029             |
|  |                    | <i>Complied with</i>  |                  |
|  |                    | Informal  | 1409             |
|  |                    | Formal  | 674              |
|  | <b>c/f 53207</b>   |   |                  |

## Housing Statistics for year ended 31st December, 1971

|   |  |      |  |  |  |     |
|---|--|------|--|--|--|-----|
| (i) Unfit dwelling houses – inspection  |  |      |  |  |  |     |
| 1 a   | Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts)  | 5494 |  |  |  | 353 |
| b   | Number of inspections made for the purpose   | 9587 |  |  |  | 264 |
| 2 a   | Number of dwelling houses (included under sub-head 1 above which were inspected and recorded under Housing Consolidated Regulations, 1925 and 1932             | 709  |  |  |  | 89  |
| b   | Number of inspections made for the purpose   | 1890 |  |  |  |     |
| 3   | Number of dwelling houses found to be in a state so dangerous to health as to be unfit for human habitation  | 634  |  |  |  |     |
| 4   | Number of dwelling houses (exclusive of those referred to under the preceding sub-heading) found to be not in all respects reasonably fit for human habitation | 1398 |  |  |  |     |
| (ii) Remedy of defects without service of Formal Notices  |  |      |  |  |  |     |
| Number of defective dwelling houses rendered fit in consequence of informal action by Local Authority or its officers |  | 750  |  |  |  |     |
| (iii) Action under Statutory Powers   |  |      |  |  |  |     |
| A Proceedings under Sections 9, 10 and 16 of the Housing Act 1957   |  | .    |  |  |  |     |
| 1   | Number of dwelling houses in respect of which notices were served requiring repairs  | .    |  |  |  |     |
| 2   | Number of dwelling houses which were rendered fit after service of formal notices:   | .    |  |  |  |     |
| a   | By owners  | .    |  |  |  |     |
| b   | By local authority in default of owners  | .    |  |  |  |     |

## B Proceedings under Public Health Acts

|   |  |     |
|---|--|-----|
| 1 | Number of dwelling houses in respect of which notices were served requiring defects to be remedied | 353 |
| 2 | Number of dwelling houses in which defects were remedied after service of formal notices:          |     |
| a | By owners  | 264 |
| b | By local authority in default of owners  | 89  |

## C Proceedings under Section 17 of the Housing Act 1957:

|   |   |   |
|---|---|---|
| 1 | Number of dwelling houses in respect of which Demolition Orders were made | 4 |
| 2 | Number of dwelling houses demolished in pursuance of Demolition Orders    | 9 |
| 3 | Number of houses dealt with under Housing Financial Provisions Act 1958   | . |

## D Proceedings under Section 18 of the Housing Act 1957:

|   |   |     |
|---|---|-----|
| 1   | Number of separate tenements or underground rooms in respect of which Closing Orders were made  | .   |
| 2   | Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit | .   |
| Number of houses in respect of which Closing Orders were made under Section 17 of the Housing Act 1957      |   | .   |
| Number of houses dealt with under Sections 12 to 16 of the Housing Act 1961 (Houses in Multiple Occupation) |   | 263 |

| Improvement Grants                             | Standard grants  |                  |                              | Discretionary grants |                  |                              |
|--|------------------|------------------|------------------------------|----------------------|------------------|------------------------------|
|  | During year 1971 | During year 1970 | Since commencement of scheme | During year 1971     | During year 1970 | Since commencement of scheme |
| Applications received                          | 790              | 885              | 8486                         | 927                  | 387              | 3644                         |
| Approved by Housing Committee                  | 624              | 648              | 6836                         | 603                  | 286              | 2579                         |
| Amount of grants paid on applications approved | £ 30645          | £ 41566          | £ 466176                     | £ 91476              | £ 28795          | £ 357458                     |
| Amount to be paid by the Council               | 7661             | 10391            | 116518                       | 22866                | 7198             | 89120                        |

(From Annual Report of Housing Manager)

### Rent Act 1957 Applications for Certificates of Disrepair

#### Part I – Applications for Certificates of Disrepair

|  |     |
|--|-----|
| 1 Number of applications for certificates  | 7   |
| 2 Number of decisions not to issue certificates  | 1   |
| 3 Number of decisions to issue certificates  |     |
| a in respect of some but not all defects   | Nil |
| b in respect of all defects  | 3   |
| 4 Number of undertakings given by landlords under paragraph 5 of the First Schedule                    | 3   |
| 5 Number of undertakings refused by Local Authority under proviso to paragraph 5 of the First Schedule | Nil |
| 6 Number of certificates issued  | 3   |

#### Part II – Applications for cancellation of Certificates

|   |     |
|---|-----|
| 7 Applications by landlords to Local Authority for cancellation of certificates | 2   |
| 8 Objections by tenants to cancellation of certificates                         | Nil |
| 9 Decisions by Local Authority to cancel in spite of tenants' objection         | Nil |
| 10 Certificates cancelled by Local Authority                                    | 2   |

### Offices, Shops and Railway Premises Act 1963

#### Registration of general inspections

| Class of premises                                    | Number of registered premises | Total number of registered premises at end of year | Number of reg. premises receiving a general inspection during year | Number of reg. premises receiving a general inspection during year |             |
|--|-------------------------------|--|--|--|-------------|
|  |                               |  |  | during year  | end of year |
| Offices  | 72                            | 1341   | 920  |  |             |
| Retail Shops   | 73                            | 1742   | 1346   |  |             |
| Wholesale shops, warehouses                          | 21                            | 301  | 168  |  |             |
| Catering establishments open to the public, canteens | 20                            | 385  | 385  |  |             |
| Fuel storage depots                                  | .                             | 1  | 1  |  |             |
| <b>Totals</b>  | <b>186</b>                    | <b>3770</b>  | <b>2820</b>  |  |             |

Number of visits of all kinds by inspectors to registered premises 4310

### Analysis of persons employed in registered premises by workplace

| Class of workplace                         | Number of persons employed |
|--|----------------------------|
| Offices                                    | 13299                      |
| Retail shops                               | 10665                      |
| Wholesale departments, warehouses          | 3577                       |
| Catering establishments open to the public | 2178                       |
| Canteens                                   | 20                         |
| Fuel storage depots                        | 2                          |
| <b>Totals</b>                              | <b>29741</b>               |
| Total males                                | 14444                      |
| Total females                              | 15297                      |

### Outwork (Sections 110 and 111)

#### Total number of outworkers in August 1971

|                              |            |
|------------------------------|------------|
| Wearing apparel, making etc. | 302        |
| Boot and shoe manufacture    | 142        |
| Elastic Manufacturers        | 15         |
| Department store             | 1          |
| <b>Total</b>                 | <b>460</b> |

## **Observations on the administration of the Factories Act, 1961 Part 1 of the Act**

| Inspections for the purpose of provisions as to health (inspections made by Public Health Inspectors)       |          |                    |                                |                 |
|---|----------|--------------------|--------------------------------|-----------------|
|   | Premises | Number on Register | Inspections and re-inspections | Written notices |
| (i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by the local authority                  | 57       | 22                 | .                              | .               |
| (ii) Factories not included in (i) in which Section 7 is enforced by the local authority                    | 2061     | 120                | .                              | .               |
| (iii) Other premises in which Section 7 is enforced by the local authority (excluding out-workers premises) | .        | .                  | .                              | .               |
| Total   | 2118     | 142                | .                              | .               |

#### **Factories - Cases in which defects were found**

| Particulars                              | Found   | Remedied | Referred to H.M. Inspector | Number of cases in which prosecutions were instituted |
|--|---|----------|----------------------------|---|
| Want of cleanliness (Sect. 1)            | 5   | 4        | .                          | .   |
| Overcrowding (Sect. 2)                   | .   | .        | .                          | .   |
| Unreasonable temperature (Sect. 3)       | .   | .        | .                          | .   |
| Inadequate ventilation (Sect. 4)         | 1   | .        | .                          | .   |
| Ineffective drainage of floors (Sect. 6) | .   | .        | .                          | .   |
| Sanitary conveniences (Sect. 7)          | a insufficient<br>b unsuitable or defective<br>c unsatisfactory labelling of accommodation<br>(not including offences - out work) | .        | .                          | .   |
|  |   | 5        | 4                          | 1   |
|  |   | .        | .                          | .   |
| Total                                    | 11  | 8        | 1                          | .   |

### Smoke Control Orders in force

| Area No. | Area Name                  | Operative Date | Council Houses | Private dwellings | Other buildings |
|----------|----------------------------|----------------|----------------|-------------------|-----------------|
| 1        | St. Matthews               | 1 Sept. 1958   | 735            | 1                 | 3               |
| 2        | Central                    | 1 Sept. 1958   | .              | 45                | 504             |
| 3        | Lee Street                 | 1 Sept. 1960   | 34             | 93                | 346             |
| 4        | Church Gate                | 1 Oct. 1961    | .              | 98                | 321             |
| 5        | Aerodrome                  |                | 438            | 6                 | 29              |
| 6        | Lutterworth Road           |                | 1821           | 1032              | 61              |
| 7        | Dane Hills                 | 1 Oct. 1962    | 467            | 1443              | 32              |
| 8        | New Parks                  | 1 Oct. 1963    | 3570           | 118               | 19              |
| 9        | Highcross Street           |                | .              | 47                | 167             |
| 10       | Braunstone West            | 1 Oct. 1964    | 2100           | 8                 | 8               |
| 11       | Granby                     |                | .              | 132               | 753             |
| 12       | Willow Street              |                | 737            | 2                 | 17              |
| 13       | Tudor Road                 | 1 Dec. 1964    | .              | 1057              | 44              |
| 14       | Braunstone Park            | 1 Dec. 1965    | 1150           | 6                 | 5               |
| 15       | Fosse                      | 1 Dec. 1965    | .              | 4513              | 89              |
| 16       | Narborough Road            | 1 July 1967    | 1590           | 3430              | 68              |
| 17       | Aylestone                  | 1 Nov. 1967    | 100            | 3600              | 98              |
| 18       | Beaumont Leys              | 1 Nov. 1967    | 2000           | 2875              | 121             |
| 19       | Saffron 1                  | 1 Nov. 1968    | 1448           | 5                 | 10              |
| 20       | West Knighton              | 1 Nov. 1968    | 5              | 1404              | 17              |
| 21       | Aylestone Road             | 1 Nov. 1968    | 55             | 1165              | 115             |
| 22       | Victoria Park              | 1 Nov. 1968    | 75             | 382               | 146             |
| 23       | Abbey Park                 | 1 Nov. 1968    | 40             | 956               | 297             |
| 24       | Corporation Road           | 1 Nov. 1968    | 10             | 1667              | 121             |
| 25       | Knighton                   | 1 Nov. 1969    | .              | 6061              | 23              |
| 26       | Saffron 2                  | 1 Nov. 1969    | 930            | .                 | 10              |
| 27       | Belgrave and Rushey Fields | April 1971     | 687            | 7350              | 434             |
|          |                            | Totals         | 17992          | 37496             | 3858            |

### **Smoke Control Orders (awaiting confirmation)**

| Area No. | Area Name   | Operative Date | Council Houses | Private dwellings | Other buildings |
|----------|-------------|----------------|----------------|-------------------|-----------------|
| 28       | Stoneygate  | 1 July 1972    | 60             | 3351              | 101             |
| 29       | Mayflower   | 1 July 1972    | 550            | 1580              | 33              |
| 30       | Crown Hills | 1 Nov. 1972    | 843            | 6323              | 585             |

### **Smoke Control Orders (proposed)**

| Area No. | Area Name        | Operative Date | Council Houses | Private dwellings | Other buildings    |
|----------|------------------|----------------|----------------|-------------------|--------------------|
| 31       | Spinney Hill     | 1 Nov. 1973    | 31             | 4628              | not yet determined |
| 32       | Netherhall       | 1 Nov. 1973    | 1541           | 598               | "                  |
| 33       | West End         | 1 Nov. 1973    | .              | 134               | "                  |
| 34       | Spencefield Lane | 1 Nov. 1974    | 961            | 2593              | "                  |
| 35       | West Humberstone | 1 Nov. 1974    | 579            | 1423              | "                  |
| 36       | Thurncourt Road  | 1 Nov. 1975    | 1749           | 106               | "                  |
| 37       | Thurmaston Lane  | 1 Nov. 1975    | .              | 1203              | "                  |
| Totals   |                  |                | 4861           | 10685             |                    |

**Food and Drugs Act, 1955****Milk Sampling for chemical quality**

|                                 |            |
|---------------------------------|------------|
| Pasteurised Milk                | 326        |
| Pasteurised Channel Island Milk | 18         |
| Sterilised Milk                 | 115        |
| Ultra Heat Treated              | 39         |
| <b>Total</b>                    | <b>498</b> |

**Milk (Special Designation) Regulations, 1963-1965**

|  |            |
|--|------------|
| Pasteurised Milk (bottles and cartons)                       | 232        |
| Pasteurised Channel Island Milk (bottles)                    | 18         |
| Pasteurised Milk ( $\frac{1}{2}$ pints from school supplies) | 94         |
| Sterilised Milk (bottles)                                    | 115        |
| Ultra Heat Treated   | 39         |
| <b>Total</b>   | <b>498</b> |

**Bacteriological Examinations of milk bottles and churns**

Rinses from churns and bottles were taken at regular intervals in order to assess the efficiency of the washing plant at the dairies.

|                               |     |
|-------------------------------|-----|
| Number of bottle rinses taken | 226 |
| Number unsatisfactory         | 14  |
| Number of churn rinses taken  | 144 |
| Number unsatisfactory         | 10  |

An unsatisfactory bottle has a count of more than 600 colonies and an unsatisfactory churn more than 250,000 colonies.

**Examination of milk supplies for antibiotics**

|                         |    |
|-------------------------|----|
| Number of samples taken | 92 |
| Number unsatisfactory   | 1  |

**Food and Drugs Act, 1955****Sampling of food and drugs other than milk**

The following is a summary of samples submitted to the Public Analyst. Full details appear in the City Analyst's section of this Report.

|                             |      |
|-----------------------------|------|
| Food samples – Formal       | 34   |
| Food samples – Informal     | 1235 |
| Number unsatisfactory       | 81   |
|                             |      |
| Drug samples – Formal       | 1    |
| Drug samples – Informal     | 66   |
| Number unsatisfactory       | 6    |
|                             |      |
| Total food and drug samples | 1336 |
| Total number unsatisfactory | 87   |

### **Ice Cream Sampling**

#### **Bacteriological Examination**

103 samples were submitted for bacteriological examination during 1971 of which 11 were unsatisfactory.

The unsatisfactory samples were followed up, advice given and satisfactory samples obtained.

#### **Chemical Examination**

Number of samples 21

2 samples of soft ice cream did not conform to the Food Standards (Ice Cream) Regulations 1959. Upon investigation it was found that these were water ices and the mix was at once taken off sale.

#### **Bacteriological Examination of Shellfish**

Number of samples 54

The samples were mostly of a higher standard than the previous year.

#### **Other Sampling**

##### **Fertilisers and Feeding Stuffs Act, 1926**

Number of samples taken:

Fertiliser 50

Number unsatisfactory 12

Number of feeding stuff samples taken 16

Number unsatisfactory 2

Total number of samples 66

Unsatisfactory 14

#### **Food Hygiene (General) Regulations, 1970**

| Deficiencies found:                                       |      |
|---|------|
| Insufficient or unsatisfactory sanitary accommodation     | 49   |
| Absence of notices re hand washing                        | 31   |
| Insufficient provision of sinks, washbasins and hot water | 76   |
| Absence of clean towels                                   | 22   |
| Insufficient accommodation for outdoor clothing           | 2    |
| Absence of protective clothing                            | 6    |
| Absence of first aid equipment                            | 72   |
| Dirty food rooms  | 36   |
| Dirty equipment   | 124  |
| Non-absorbent working surfaces                            | 62   |
| Defective surfaces to floor, walls, etc.                  | 256  |
| Removal of refuse   | 82   |
| Unsatisfactory lighting and ventilation                   | 17   |
| Food not protected from risk of contamination             | 75   |
| Absence of food handling equipment                        | 11   |
| Miscellaneous   | 94   |
| Total   | 1015 |

**Summary of foodstuffs condemned 1971**

|                            | Tons    | cwt | qr | lb   |
|----------------------------|---------|-----|----|------|
| Fish (excluding shellfish) | 1       | 14  | .  | .    |
| Crabs                      | .       | 2   | .  | 13   |
| Other shellfish            | .       | .   | 1  | 8    |
| Fruit                      | 64      | 11  | .  | .    |
| Vegetables                 | 96      | 8   | .  | .    |
| Poultry                    | 1       | 5   | .  | .    |
| Meat                       | English | 25  | 17 | 1 21 |
| Imported                   | 2       | 3   | 3  | .    |
| Offal                      | English | 27  | 13 | 1 7  |
| Imported                   | .       | 15  | .  | 2    |
| Rabbit                     | .       | .   | .  | 21   |

**Other foodstuffs**

|                       |            |
|-----------------------|------------|
| Pastry                | 102 lbs    |
| Flour                 | 5044 lbs   |
| Fats                  | 225 lbs    |
| Soup                  | 1485 lbs   |
| Biscuits              | 160 lbs    |
| Sugar                 | 17 lbs     |
| Tea                   | 400 lbs    |
| Meat Products         | 2992 lbs   |
| Fish Products         | 50 lbs     |
| Milk products         | 205 lbs    |
| Fruit pie filling     | 268 lbs    |
| Custard powder        | 56 lbs     |
| Nuts                  | 1200 lbs   |
| Herbs                 | 460 lbs    |
| Cakes & Cake Mixture  | 160 lbs    |
| Cereals               | 126 lbs    |
| Mustard               | 28 lbs     |
| Liquid and whole egg  | 90 lbs     |
| Mixed puddings        | 220 lbs    |
| Fruit juice           | 10 gallons |
| Baby food             | 30 lbs     |
| Cheese                | 169 lbs    |
| Confectionery         | 60 lbs     |
| Ice Cream             | 130 lbs    |
| Assorted frozen foods | 3802 lbs   |
| Meat                  | 3958 cans  |
| Fish                  | 4794 cans  |
| Milk                  | 493 cans   |
| Fruit                 | 5838 cans  |
| Vegetables            | 10026 cans |
| Miscellaneous         | 6844 cans  |
| Fruit pulp            | 745 lbs    |

### Slaughtering of animals for food 1966-1971

|                       | 1971          | Casualty animals<br>carcasses included<br>in 1971 figures |       |               |               |               |               | 1968          | 1967 | 1966 |
|-----------------------|---------------|---|-------|---------------|---------------|---------------|---------------|---------------|------|------|
|                       |               | 1970  | 1969  | 1968          | 1967          | 1966          |               |               |      |      |
| Cattle excluding cows | 18731         | 9   | 20650 | 19382         | 22652         | 25988         | 23134         |               |      |      |
| Cows                  | 696           | 4   | 219   | 389           | 835           | 761           | 1030          |               |      |      |
| Calves                | 294           | 4   | 343   | 507           | 637           | 894           | 848           |               |      |      |
| Sheep                 | 71068         | 56  | 78969 | 81533         | 100466        | 92671         | 98146         |               |      |      |
| Pigs                  | 81332         | 298   | 76799 | 85374         | 75382         | 63476         | 69302         |               |      |      |
|                       | <b>172121</b> | <b>371</b>  |       | <b>176980</b> | <b>187185</b> | <b>199972</b> | <b>183790</b> | <b>192460</b> |      |      |

**Incidence of disease** The following table summarises the quarterly returns to the Ministry of Agriculture, Fisheries and Food in connection with research and disease control carried out by the Animal Health Division.

| Adult Cattle                 | Condemnations            |         |          |         |
|------------------------------|--------------------------|---------|----------|---------|
|                              | Number slaughtered 19427 |         | Carcases | Offal   |
|                              | Total                    | Partial | Total    | Partial |
| Actinobacillosis (-mycosis)  | .                        | .       | .        | 112     |
| Bruising                     | .                        | 10      | .        | 10      |
| Cysticercosis (C. Bovis)     |                          |         |          |         |
| a Rejected                   | .                        | .       | .        | 11      |
| b Refrigerated               | 11                       | .       | .        | 11      |
| Echinococcosis               | .                        | .       | .        | 13      |
| Emaciation                   | .                        | .       | .        | 108     |
| Fascioliasis (fluke)         | .                        | .       | .        | 624     |
| Hepatic abscess              | .                        | .       | .        | 578     |
| Johnne's disease             | .                        | .       | .        | .       |
| Mastitis                     | .                        | .       | .        | 2       |
| Peritonitis                  | .                        | .       | .        | .       |
| Pneumonia and/or pleurisy    | .                        | .       | .        | 93      |
| Septicaemic conditions/fever | 11                       | .       | 11       | .       |
| Telangiectasis               | .                        | .       | .        | 19      |
| Tuberculosis                 | .                        | .       | .        | 1       |
| Tumours                      | 2                        | .       | 2        | .       |
| Other conditions             | 7                        | 3       | 7        | 300     |

| Calves                       | Condemnations          |         |          |         |
|------------------------------|------------------------|---------|----------|---------|
|                              | Number slaughtered 294 |         | Carcases | Offal   |
|                              | Total                  | Partial | Total    | Partial |
| Bruising                     | .                      | .       | .        | .       |
| Emaciation                   | 1                      | .       | .        | 1       |
| Immaturity                   | .                      | .       | .        | .       |
| Joint-ill or navel-ill       | 1                      | .       | .        | 1       |
| Septicaemic conditions/fever | 11                     | .       | .        | 11      |
| Tuberculosis                 | .                      | .       | .        | .       |
| Other conditions             | 3                      | .       | .        | 3       |

| Pigs                         |                  | Condemnations |         |       |         |
|------------------------------|------------------|---------------|---------|-------|---------|
| Number slaughtered 81,332    |                  | Carcases      |         | Offal |         |
|                              |                  | Total         | Partial | Total | Partial |
|                              | Abscess          | .             | 174     | .     | 80      |
|                              | Arthritis        | .             | 87      | .     | 409     |
| Ascariasis (Milk spot)       |                  | .             | .       | .     | .       |
|                              | Bruising         | 3             | 106     | 3     | .       |
|                              | Echinococcosis   | .             | .       | .     | .       |
|                              | Emaciation       | 8             | .       | 8     | .       |
|                              | Jaundice         | 8             | .       | 8     | .       |
| Pneumonia and/or pleurisy    |                  | .             | .       | 694   |         |
|                              | Pyaemia          | 130           | .       | 130   | .       |
| Septicaemic conditions/fever | 140              | .             | 140     | .     |         |
|                              | Swine erysipelas | 3             | .       | 3     | .       |
|                              | Tuberculosis     | 2             | .       | 2     | .       |
|                              | Tumours          | 5             | .       | 5     | .       |
| Other conditions             |                  | 9             | 7       | 9     | 7       |

| Sheep                     |                              | Condemnations |         |       |         |
|---------------------------|------------------------------|---------------|---------|-------|---------|
| Number slaughtered 71,068 |                              | Carcases      |         | Offal |         |
|                           |                              | Total         | Partial | Total | Partial |
|                           | Abscess                      | .             | 1       | .     | 2       |
|                           | Arthritis                    | 1             | 2       | 1     | .       |
|                           | Bruising                     | 2             | 1       | 2     | .       |
|                           | Cysticercus ovis             | .             | .       | .     | .       |
|                           | Echinococcosis               | .             | .       | .     | 970     |
|                           | Emaciation                   | 15            | .       | 15    | .       |
|                           | Fascioliasis (fluke)         | .             | .       | .     | 1153    |
|                           | Jaundice                     | .             | .       | .     | .       |
|                           | Pneumonia and/or pleurisy    | .             | .       | .     | 41      |
|                           | Pyaemia                      | 3             | .       | 3     | .       |
|                           | Septicaemic conditions/fever | 32            | .       | 32    | .       |
|                           | Tumours                      | 5             | .       | 5     | .       |
|                           | Other conditions             | 6             | .       | 6     | .       |

#### Other premises subject to inspection

|                  |                                |     |
|------------------|--------------------------------|-----|
|                  | Knackers' yard                 | 1   |
| Offensive trades | a Hides & skins                | 1   |
|                  | b Tripe dressers               | 1   |
|                  | Pet shops                      | 23  |
|                  | Animal boarding establishments | 2   |
|                  | Riding establishments          | 1   |
|                  | Hairdressing premises          | 402 |
|                  | Part II Poisons                | 151 |

Report for 12 months ended 31st December, 1971

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**Type of property: non-agricultural properties other than sewers**

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|   |  |        |
|---|--|--------|
| 1 | Number of properties in district   | 112271 |
| 2 | <i>a</i> Total number of properties (including nearby premises) inspected following notification       | 3769   |
|   | <i>b</i> Number infested by (i) Rats   | 1675   |
|   | (ii) Mice  | 1533   |
| 3 | <i>a</i> Total number of properties inspected for rats and/or mice for reasons other than notification | 6853   |
|   | <i>b</i> Number infested by (i) Rats   | 16     |
|   | (ii) Mice  | 200    |
|   | Number of wasps nests destroyed  | 230    |
|   | Number of feral pigeons destroyed  | 668    |

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# City Analyst

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Report for the year 1970

E R Pike, *BSc, MChemA, MPhA, MPS, FIFST, FRIC*

I have the honour to submit my eleventh annual report on the work carried out in the laboratories of the City Analyst during 1971.

The samples examined are summarised as follows:

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**Samples submitted under the Food and Drugs Act, 1955**

|        |  |      |
|--------|--|------|
| (a)    | Submitted by City of Leicester Public Health Inspectors  |      |
| (i)    | Milks for compositional analysis   | 497  |
| (ii)   | Milks for the presence of antibiotics  | 92   |
| (iii)  | Milks for the efficiency of heat treatments  | 497  |
| (iv)   | Milks for keeping quality  | 344  |
| (v)    | Foods (other than milk)  | 1219 |
| (vi)   | Drugs  | 68   |
| (vii)  | Shellfish for bacteriological quality  | 54   |
| (viii) | Bacteriological examinations (Water, Churns and Bottle Rinses, Foods for efficiency of heat treatment) | 1230 |
| (b)    | Food and Drugs submitted by private persons  | 83   |

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**Samples submitted under the Fertiliser and Feeding Stuffs Act, 1926**

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**Samples submitted by Public Protection Dept. under the Trade Descriptions Act, 1968**

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**Blood and Urine samples examined under the Road Safety Act, 1967**

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**Miscellaneous Samples**

|       |   |      |
|-------|---|------|
| (i)   | Atmospheric pollution samples   | 2782 |
| (ii)  | Miscellaneous samples examined for the Health Department  | 98   |
| (iii) | Blood and Urine samples submitted for Lead-Mercury screening                                    | 127  |
| (iv)  | Samples examined for Corporation Departments other than Health and Public Protection Department | 503  |
| (v)   | Samples examined for other Local Authorities  | 670  |
| (vi)  | Samples examined for private persons (other than Road Safety Act samples)                       | 459  |
|       | Total   | 9150 |

The total number of samples examined shows an apparent reduction as compared with the 10,391 examined in 1970; this being due to the loss of the phenylketonuria blood screening samples 2,280 of which were examined in 1970. After allowing for these samples the number of specimens examined in 1971 should be compared to a figure of 8,111, thus showing an increase of 1,039. However, as I have stressed in previous reports the work load of the laboratory cannot be assessed from sample numbers but from total examinations performed upon the samples; as an example a single soil sample currently being examined from the Beaumont Leys site requires estimations of both total and available contents of zinc, copper, nickel, chromium, cadmium and lead. In addition analyses for arsenic and mercury are also called for making a total of fourteen estimations for one sample! Also there is a recent tendency to be much concerned regarding the occurrence of traces of toxic metals, pesticides etc. in foodstuffs and it is with some satisfaction that I report that this laboratory has made useful contributions towards the compilation of statistics called for by the Association of Public Analysts in their collaborations with the Working Party set up by the Government to investigate the occurrence of toxic metals in foods. (See legal section).

Obviously the extra work load involved calls for heavier demands upon laboratory staff, however, staff increases have been delayed by a continued policy of modern instrumentation. It was therefore with great relief that early in 1971 we were able to install an Atomic Absorption Spectrophotometer which has been invaluable in trace metal estimations and has indeed already more than paid for itself in the several thousand metal estimations already carried out on Beaumont Leys soil samples alone.

It is with satisfaction that I report that there have been no changes in technical staff during 1970, and I must pay tribute to the able and willing service which each without exception has given throughout the year. Examination

successes are always a pleasure to acknowledge and congratulations are extended to Mr. S. D. Musgrave for his election to the Licentiateships of the Institute of Biology and the Institute of Food Science and Technology. Appreciation is also recorded to my deputy Miss L. C. Graham and the senior assistant Mr. M. W. Fogden for their help and co-operation in giving lectures and talks to the many organisations who show interest in the work of the department. Staff activity in scientific societies is also encouraged, both Miss Graham and myself being members of the Midland Committee of the Institute of Food Science and Technology whilst Mr. M. W. Fogden is a member of the East Midland Section Committee of the Royal Institute of Chemistry.

I must also thank members of the Inspectorate staffs with whom we are in daily contact. It has been a pleasure to work with them all not only to exchange views and ideas on our work but also to appreciate their efforts in our mutual task in safeguarding the public.

Finally, I thank the Chairman, Members of the Health Committee and the Medical Officer of Health for their interest and encouragement in the activities of the Department.

## Legal

*Legislation introduced during 1971 affecting the work of the City Analyst.*

During 1971 little new legislation was enacted though several Regulations made in earlier years came into operation, these include the following:

The Coffee and Coffee Products Regulations, 1967, (date of operation 4.1.71).

The Margarine Regulations, 1967, (date of operation 4.1.71).

Colouring Matter in Food (Amendment) Regulations, 1970, (operational 1.1.71).

Fish and Meat Spreadable Regulations, 1968, (operational 15.3.71).

Ice Cream Regulations, 1967, (operational from 4.1.71).

### *The Preservatives in Food (Amendment) Regulations, 1971*

This amendment to the Preservatives in Food Regulations was made upon 25th May, 1971, and came into operation upon 1st September, 1971. The effect of these regulations:

- (a) Impose limits on the amounts of sodium nitrate and sodium nitrite which may be added to bacon and ham;
- (b) Impose a limit on the amount of sodium nitrate which may be added to pickled meat; and
- (c) Impose in respect of all pickled meat, the limit on the amount of added sodium nitrite, which formerly applied only to cooked pickled meat.

### *Circular FSH 2-71. The Bacteriological Examination of Fresh Cream*

This Circular issued in June, 1971, by the Minister of Agriculture, Fisheries and Food stated that as a result of a recent survey by a working party of the Public Health Laboratory Service, on the bacteriological quality of fresh cream, the presence of pathogenic bacteria was rarely found and food poisoning incidents traceable to fresh cream have been very rare in number. However, cream has been shown to have frequently a high bacterial content, the main result of which is a loss of keeping quality. The bacteria present are usually the result of contamination during processing.

The circular confirmed the 'Methylene blue' test as a satisfactory screening test for the examination of cream for hygienic quality and conditions for the test were set out.

No legal enforcement was envisaged in the Circular, but it was stated 'If samples from the same source repeatedly decolourise Methylene blue after overnight incubation, consultations should be arranged between the local authority, the laboratory and the dairy, perhaps with inspection of the dairy premises and retail storage conditions in an effort to eradicate production faults.'

### *Reviews of Food Standards Committee and Food Additives and Contaminants Committee*

The lack of new regulations introduced during 1971 was balanced by a fair number of proposed reviews of existing regulations, or possible new ones in which interested parties were requested to submit evidence.

These included:

#### *Review of Date Marking of Food (March 2nd, 1971)*

The Food Standards Committee's Interim Report to the Minister appended this Circular, the recommendation of which was to request a review inviting evidence from interested parties.

#### *Proposed Review of Novel Proteins (March 30th, 1971)*

The development of novel protein products which include textured vegetable proteins made from materials such as soya beans and proteins from micro-organisms known as 'single-cell proteins', has stimulated this review. Much concern has been shown by certain members of the public regarding possible substitution of meat by these products (see later sections of this report) since these preparations are often presented as simulated meats.

#### *Proposals to Amend the Bread and Flour Regulations, 1963 (29th October, 1971)*

The effect of these proposals would be:

- (a) to permit the use of Azodicarbonamide and L-Cysteine hydrochloride monohydrate, within quantitative limits, as additional alternatives to the flour improving agents at present permitted;
- (b) to add ferrous sulphate to the permitted alternative forms of iron, which is required to be added as a nutrient to all flour other than wholemeal;
- (c) to replace the specified form of reduced iron, which is one of the present alternatives, by a form of iron powder; and

(d) to relate the other nutrients required to be present in flour to particular specifications in the British Pharmacopoeia, 1968, and the British Pharmaceutical Codex, 1954.

It was proposed that the amending regulations would be made and brought into force as soon as practicable.

#### *Antioxidants in Food Regulations—Review of the use of Butylated Hydroxytoluene*

The Food Additives and Contaminants Committee issued a report on April 19th, 1971, on the use of butylated hydroxytoluene (B.H.T.) as an antioxidant. Although the report had been published, Ministers have yet to reach decisions on the recommendations and before doing so requested representations from interests concerned. The Report recommended that no change in the Antioxidant Regulations, 1966, need be made.

#### *Review of Further Classes of Food Additives—Liquid Freezants of Food*

The quick freezing of food may be accomplished by spraying or immersing in a liquid freezant. Liquid freezants include liquid nitrogen and proprietary freezants; such substances are not at present controlled by any specific food regulations, though they are subject to the general provisions of the Foods and Drugs Act, 1955. Section 1 of the Act provides that it is an offence to add or subtract any substance to food, or subject any food to any process or treatment so as to render the food injurious to health, and to sell food so rendered injurious. Section 2 prohibits the sale to the prejudice of the purchaser of food which is not of the nature, substance or quality demanded, and section 8 prohibits the sale of food which is unfit for human consumption. The object of the review is to consider such liquid freezants with the possibility of control by regulations.

#### *Survey of Mercury in Food (First Report 1971)*

Following reports in the United States (December, 1970) that high levels of methyl mercury compounds had been found in canned tuna, the Laboratory of the Government Chemist examined samples of canned tuna and found organically combined mercury to the extent of 0.1 to 0.8 parts per million. Sufficient concern was felt over the presence of such amounts of mercury that the Pharmacology Sub-Committee recommended that efforts should be made to reduce further contamination of the environment with Mercury, and that further studies should be made of the occurrence of mercury in all varieties of foodstuffs. However, it was felt that there was no necessity for the banning of the sales of tuna-fish considering the low sales of this commodity in Britain.

As a consequence of these recommendations, a Working Party was set up with the remit to determine Mercury and certain other heavy metals in food in the United Kingdom, and to make reports. This report is the result of this investigation. Further reports relating to lead and cadmium are to be made in the future.

The report concluded that:

- 1 the intake of mercury from food by the average consumer in this country is not more than 10 micrograms and is probably in the region of 7-8 micrograms per day.
- 2 the Mercury contents of the major foods of the national diet are extremely low and in most cases barely detectable.
- 3 the average concentrations in most canned and fresh fish and shellfish are low but higher than in other foods; the intake of mercury by the average consumer from fish is estimated to be about 2 micrograms per day.
- 4 fish from certain coastal areas contain higher concentrations of mercury and from a few average areas about 0.5 p.p.m.
- 5 it appears that the only sections of the community which might consistently consume well above average amounts of mercury are those composed of individuals consuming

large amounts of fish drawn almost entirely from such an area or those consuming large amounts of canned tuna.

#### *Joint Survey of Pesticide Residues in Foodstuffs sold in England and Wales*

This is a report of Results obtained during the second year of the National Pesticide Residues Survey undertaken jointly by the County Councils Association, the Association of Municipal Corporations, the Urban District Councils Association and the Association of Public Analysts. The programme for the year was planned on the basis of results and experience gained during 1966-7, the range of foodstuffs being adapted accordingly. The slight increase in the number of foodstuffs found to contain residues was not considered significant. The results of the two years' tests are combined and compared, and details are included of findings for mercury residues on a large number of samples analysed for this survey.

The results of this second year survey again showed no evidence of any gross contamination and none of the results obtained was considered to warrant any vigorous follow-up action.

#### *Mould Content of Tomato Products (Official Standard of the Association of Public Analysts)*

This is a standard adopted by the Association of Public Analysts to control the quality of tomato products and to eliminate the use of unacceptable amounts of mouldy tomatoes in accordance with the following standards:

##### **1 Tomato Puree.**

The Howard Mould Count shall not exceed 50% positive fields.

##### **2 Tomato Juice.**

The Howard Mould Count shall not exceed 25% positive fields.

##### **3 Tomato Ketchup.**

The Howard Mould Count shall not exceed 30% positive fields.

#### *European Pharmacopoeia. Vol. II. 1971*

This second volume of the European Pharmacopoeia produced by the European Pharmacopoeia Commission representing the Six E.E.C. countries with the addition of Switzerland and Britain, is complimentary to the first Volume produced in 1969. The contents included amendments to the first volume; methods of analysis; standards and reference substances; monographs and appendices.

The monographs refer to some 125 substances and where applicable defines the substance, gives tests for identification, assay procedures, storage and labelling instructions. The European Pharmacopoeia now takes precedence over the British Pharmacopoeia when it includes a monograph of any specific substance.

#### *Addendum 1971 to the British Pharmacopoeia, 1968*

This addendum, effective from 1st October, 1971, is the second addendum to the B.P. 1968. It includes 59 new monographs and 143 amendments to existing monographs, 64 of which are to give effect to the requirements of the European Pharmacopoeia.

#### *Supplement 1971 to the British Pharmaceutical Codex, 1968*

Some 95 new monographs are included whilst amendments are prescribed for 58 substances. Among the new monographs aerosol inhalants are included, standards being given regarding details of containers with storage and labelling procedures.

#### *Supplement to British Veterinary Codex, 1965*

This supplement came into effect on April 5th, 1971. Some 38 new monographs have been included in Part I of the Codex whilst nearly 60 new monographs on preparations such as dips, injections, etc., have been set out in Part III. The development of analytical methods applicable to pre-mixes and concentrates for medicating animal feeds, has enabled standards to be included and an appendix is given

indicating methods for the identification of active ingredients. The rapid advances in the manufacture and testing of vaccines, and other biological products since the B. Vet. C. was issued in 1965, has necessitated a complete revision of this text which is included in the Supplement. Many changes are included to conform to requirements of the European Pharmacopoeia.

It may be noted that much of the revision of the Pharmacopoeias is in connection with changes consequent upon publication of the European Pharmacopoeia. Though there has been little active new legislation with regard to food-stuffs, it can be predicted that a spate of new food regulations must be imminent to realign our food laws to conform to E.E.C. practice.

#### *Milk*

No matter what the composition of a specimen of milk might be, if that specimen is as provided direct from the cow it cannot be said to be adulterated. For this reason the standards prescribed by the Sale of Milk Regulations, 1939 are described as 'presumptive' standards and milk which does not contain a minimum of 3% fat as 8.5% milk-solids-not-fat is presumed to be adulterated unless the contrary is proved. In practice the presence of added water is confirmed by the Hortvet freezing point test together with a more detailed analysis of the specimen. Often the presence of mastitis in the cow can be detected by compositional characteristics of a milk sample and appropriate action recommended. Fat deficiency can result from abstraction of cream or it might be simply a genuine but poor quality milk. Such fat deficiencies can only be proved by the taking of a so-called 'appeal to cow' sample, but obviously this check can only apply to non-bulked raw milks. Provided the milk is of the same composition as given by the cow no offence can be proved even if the fat or solids not fat are below the presumptive standards.

The law relating to milks designated as 'Channel Island' or 'South Devon' is different. Such Milks are governed by the Milk and Dairies (Channel Islands and South Devon Milk) Regulations, 1956 and are subject to an absolute minimum of 4% fat. No absolute standard is fixed for milk-solids-not-fat and the presumptive minimum of 8.5% is therefore applied; nevertheless Channel Island Milks usually contain a much higher solids-not-fat content as indicated in the analytical data shown below.

495 samples of milk were submitted during 1971 for compositional analysis of which 19 were designated 'Channel Island'. No 'Channel Island' milk was the subject of an adverse report, the average fat content being 4.42% by weight, and solids-not-fat content 8.95% by weight.

The annual average composition of milk (other than Channel Island) is given in the table below:

**Annual Average Composition of Milk**

| Year | Fat % | Solids not Fat % | No. of samples examined |
|------|-------|------------------|-------------------------|
| 1963 | 3.70  | 8.76             | 1008                    |
| 1964 | 3.71  | 8.72             | 985                     |
| 1965 | 3.73  | 8.71             | 1005                    |
| 1966 | 3.72  | 8.67             | 1038                    |
| 1967 | 3.69  | 8.60             | 1007                    |
| 1968 | 3.64  | 8.64             | 622                     |
| 1969 | 3.72  | 8.71             | 552                     |
| 1970 | 3.67  | 8.67             | 600                     |
| 1971 | 3.68  | 8.77             | 476                     |

The number of samples of milk examined during 1971 has continued to decline being the lowest recorded for many years.

This reduction of sampling has been welcomed in the laboratory due to a great increase in work load in other sections but may also be justified since there are now only two dairies left which supply the whole of the City. Both of these dairies are efficiently run and maintain their own laboratory control over Producers' milks, and indeed work

closely with this laboratory and the Food Inspectorate in cases of dubious samples. No instance of watered milks were encountered during the year.

#### *Heat Treatment of Milk*

Present legislation prohibits the sale of raw milk except for milk bottled on specifically prescribed forms (i.e. so called Farm Bottled Milks). Thus milk must be subjected to some form of heat treatment to destroy the presence of any disease-producing organisms such as tubercular or undulant fever (brucella) bacteria. Such forms of heat treatment might consist of 'pasteurisation', 'sterilisation', or 'ultra-heat treatment (U.H.T.)'.

In the pasteurisation treatment milk is heated to 161°F for at least 15 seconds and then immediately cooled to 50°F. Satisfactory treatment is checked by the 'phosphatase test'; all 341 samples so tested were satisfactory. All these samples also fulfilled the conditions of the methylene-blue test for keeping quality.

Sterilised Milk is subjected to a more drastic heat treatment and is maintained at 212°F (i.e. boiling point of water) for such time as is required for the resultant milk to satisfy the turbidity test. All 116 samples tested were satisfactory.

Ultra Heat Treated Milk (U.H.T.) is milk which has been heated to 270°F for a period of not less than 1 second and then filled into sterile containers. 38 samples were examined and all passed the required bacterial colony count test.

#### *Antibiotics in Milk*

The presence of antibiotics, particularly penicillin, in milk arises from the use of these substances in the treatment of cows for mastitis. After such treatment the farmer is advised to withhold from sale milk from the treated animals for at least 48 hours since such milk will contain traces of antibiotic. This is important since some people are allergic to penicillin and in any case continued small doses of an antibiotic can render its subsequent use ineffective if its use is required for therapeutic treatment.

During 1963 a government report recommended Food and Drugs Authorities to test milk for the presence of antibiotics and when detected to take appropriate action.

During 1971 92 samples of producers' raw milk was tested for antibiotics and penicillin was detected in one informal sample. Subsequently a formal sample was taken which also proved to contain penicillin (in excess of 0.05 international units per millilitre) a finding which was substantiated when the Food Inspector found that the farmer had been using a penicillin ointment on the cow's teats.

#### *Bacteriological Examinations—Churn Rinses and Milk Bottles*

A pre-requisite of clean milk is that the vessels in which it is packed should be clean. A regular check is therefore carried out on the bacteriological state of washed churns and milk bottles.

For churns the colony count is recorded from a washing of the churn with Ringers' solution after incubation for 48 hours at 37°C. A count per churn of not more than 50,000 is regarded as 'satisfactory'; between 50,000 and 250,000 as 'fairly satisfactory'; and over 250,000 as unsatisfactory. Of the 144 churns examined 4 were found to be fairly satisfactory and 10 unsatisfactory. One of the unsatisfactory samples was found to be contaminated with faecal coliform organisms.

226 bottles were examined by a similar test of which 14 were unsatisfactory (4 with faecal coliform organisms) and 5 were recorded as being fairly satisfactory.

The proportion of unclean churns was approximately 7% as compared with 6.2% for milk bottles. The comparison for 1970 is 11.7% unclean churns and 1.2% unclean bottles which indicates some improvement on churn washing but a deterioration with regard to bottles.

#### *Shell fish*

Shell fish are examined for the presence of faecal type coliform organisms by a method developed by Ministry Fisheries Experimental Station at Conway. This sets certain

sanitary standards: Grade I containing 0-5 B. Coli per mil of flesh is acceptable in all markets; Grade II containing 6-15 B.Coli-mil is acceptable in some markets; and Grade III containing more than 16 B.Coli-mil of flesh is not acceptable for direct human consumption. 23 samples of mussels were examined during 1971 of which two samples were Grade II the rest being Grade I.

#### *Waters*

It is the responsibility of the supplier of a potable water to ensure that the water is of a sufficient bacteriological and chemical quality for potable purposes. This responsibility however only applies as far as the turncock supplying the premises, thereafter when the water flows through the pipes and supply system of a building it is the occupiers' responsibility to ensure that no contamination of the water occurs. In private homes the cold water supply is usually direct from the mains and thus there is little chance of contamination. In larger premises it is usual to supply the water through a storage tank often situated in the loft. It is in this installation that contamination can occur; it is not unheard of to find the remains of birds and rodents in such tanks. Especially therefore in large buildings, cafes, restaurants etc., it is essential that bacteriological checks be made on the water from drinking supply taps in order to safeguard the health of the many people who might drink such water. In the course of 1971, 122 such samples were submitted by Public Health Inspectors for bacteriological checks, of these 11 were found to contain coliform organisms, 8 of which were of the faecal type. Thus 9% of the samples taken were found to be of dubious bacteriological quality, quite a hazard when one considers the large number of people exposed to such contaminated water in these establishments.

460 further samples were taken direct from a main supply as a check of the bacteriological quality of the water as supplied.

#### **Pasteurised Foods (other than milk)**

##### *(a) Pasteurised Whole Egg (Frozen)*

During 1971, 87 samples of frozen pasteurised egg were submitted for subjection to the alpha-amylase test for efficiency of pasteurisation, of these 13 specimens did not satisfy the test (i.e. approximately 15% were rejected). Such a high failure rate was considered to be somewhat disturbing and as a consequence 72 samples were examined for the presence of coliform organisms. This exercise produced even more disturbing results for no less than 35 of these samples (i.e. 48.6%) were found to contain faecal-type coliform organisms. Such evidence could be explained in two ways. (a) either the pasteurisation process is insufficient to destroy the faecal-type coliform organisms or (b) there was some post-pasteurisation contamination. These findings however would appear to be in conformity with those found by Scalzo, Dickinson, Read and Parker (*Residence Times of Egg Products in Holding Tubes of Egg Pasteurisation—Food Technology*, Champaign, 23. (5) 80) who have remarked on the fact that although pasteurisation effectively reduces the percentage of liquid egg lots containing salmonella organisms, this pathogen is unfortunately being detected in the pasteurised product. For example in 1966, 26% of all pasteurised egg shipments examined by the Food and Drugs Administrators were contaminated with this pathogen.

It should be noted that the samples examined in this laboratory were not examined for salmonella organisms but only for E coli (faecal coliform organisms), the responsibility for investigation of pathogens being that of the Public Health Laboratory Service. It is probable that salmonella figures would be less disturbing. Nevertheless our investigations indicate that frozen pasteurised egg is a potential health hazard since it is such an efficient substrate for the multiplication of organisms. It is fortunate that when used in cakes the baking process is lethal to pathogenic organisms. Obviously it would be unwise to use frozen egg in an uncooked product.

### (b) *Ice Cream*

The Ice Cream (Heat Treatment Etc.) Regulations, 1959 and 1963 require all ice creams (excepting water ices or similar confections having a pH value of less than 4.5) to be subjected to a prescribed form of heat treatment as follows:

(i) The mixture shall not be kept for more than one hour at any temperature exceeding 45°F before being pasteurised or sterilised. Pasteurisation is carried out: (1) by heating to not less than 150°F for 30 minutes, or (2) by heating to not less than 160°F for 10 minutes: or (3) by heating to 175°F for not less than 15 seconds. Sterilisation involves heating to a temperature of not less than 300°F for at least 2 seconds.

After heat treatment the mixture must be cooled to less than 45°F within two hours and not allowed to exceed such temperature whilst awaiting the freezing process.

In order to assess the efficiency of heat treatment and subsequent storage effects upon the hygienic quality of ice cream the Ministry of Health in Circular No. 69-47 drew attention to the methylene-blue reduction test for grading ice cream developed by the Public Health Laboratory Service Staff of the Medical Research Council (Gillespie et al., 1947, 1948, 1949, 1950).

In this test the time taken to decolourise a standard methylene blue solution by a precise amount of the product at 37°C is recorded:

|           |  |
|-----------|--|
| Grade I   | decolourisation over 4 hours                   |
| Grade II  | decolourisation over $2\frac{1}{2}$ to 4 hours |
| Grade III | decolourisation over $\frac{1}{2}$ to 2 hours  |
| Grade IV  | decolourisation less than $\frac{1}{2}$ hour   |

The Ministry Circular suggests that if ice cream consistently fails to reach Grades I or II it is reasonable to regard this as indicating defects of manufacture or handling which call for investigations.

During 1971, 103 samples of ice cream were examined for hygienic quality with the following results.

|           |     |
|-----------|-----|
| Grade I   | 50  |
| Grade II  | 35  |
| Grade III | 35  |
| Grade IV  | 8   |
| Total     | 103 |

### *Swimming Bath Waters*

A total of 77 specimens of swimming bath waters were submitted by the Public Health Inspectorate during 1971. Of these 62 were taken from City of Leicester Swimming baths, 12 from privately controlled baths and 3 from school baths. All were examined for evidence of adequate chlorination and pH value to ensure protection of the health and comfort of the swimmer. Once more I am pleased to report that all the City of Leicester baths samples were satisfactory. samples taken from privately controlled baths were insufficiently chlorinated but the bacteriological state of the waters was acceptable.

The three school bath samples were remarkable in that they were excessively chlorinated, the maximum chlorine content recorded was at least 40 p.p.m. whereas the optimum amount is between 1 to 3 p.p.m. Investigation showed that the person in charge of the baths was using a kit for measuring the chlorine content using the D.P.D. method. With this method, if a chlorine content is on the high side the excess chlorine will bleach the colour developed indicative of the presence of chlorine. Inevitably more chlorine is added and obviously no chlorine is indicated by the next test, so in goes more chlorine until a ridiculously high content ensues causing ultimate discomfort to the bather. In this instance the bath was a small teaching bath and advice was given to enable the condition of the water to be rectified.

## Additives and Preservatives in Food

As one progresses in age it becomes more obvious to the pensive person that life is a compromise; one rarely attains an advantage without relinquishing though perhaps in a minor degree, some other attribute. One must balance the advantage against the disadvantage and this indeed applies to the concept of the chemical preservation of food. It is extraordinary that many people are apt to rebel at the so-called adulteration of food by the use of chemical additives and yet these same people would complain of any deterioration in the quality of their stored food, or the lack of flavour, texture or colour in their diet. Much has been written of the connection between these additives and the incidence of cancer and other maladies. In particular chemical preservatives must, by definition, be substances capable of inducing a biological effect and obviously there must be a small possible risk in their use. It is of course, possible that the relatively high incidence of cancer and heart disease in modern man might be a consequence of the use of such substances or is it because he lives longer these days? It would seem from this reasoning that in spite of the use of these chemicals he is on the winning side of the bargain!

If there should be some association between cancer and preservatives then this might occur in the case of the use of nitrites and nitrates in the preservation of meat since it is known that in some circumstances the breakdown of protein to amino acids could react with nitrite to form carcinogenic nitrosamines. No doubt with this in mind the Preservatives in Food (Amendment) Regulations were made upon 25th May, 1971 and brought into operation upon 1st September, 1971. These regulations restrict the amount of sodium nitrate to 500 parts per million and sodium nitrite to 200 parts per million in bacon, ham and cooked or uncooked pickled meats. Consultation of our laboratory records indicates that an average nitrite content for bacon is about 150 p.p.m., well within the limit. It may be asked why use nitrites at all if they can result in carcinogenic nitrosamines?

The incidence of detrimental effect is however low and the demand for a good 'pink' colour in bacon, ham and pickled meats is definite, for who would buy these products if they were the unattractive dark greyish red colour which results unless nitrite or nitrate is used in the pickling bath.

Sausages are permitted to contain preservative in the form of sulphur dioxide up to a maximum of 450 parts per million by weight but only if its presence is declared. This declaration may be by label, notice in the shop, or verbally to the customer. Eight samples received adverse reports because of the presence of undeclared preservative. None of these samples however contained excessive sulphur dioxide.

The use of preservative on oranges was the subject of editorial comment in the *Leicester Mercury* during the early part of the year. This was the result of a person, linguistically knowledgeable, whose talents enabled him to translate the German and French labels of some orange crates in the Leicester Wholesale Fruit Market. These labels declared the presence of Diphenyl and O-phenylphenol on the oranges. It has long been the practice to treat oranges or the wrappers with such compounds which have a fungicidal action and thereby repress the tendency of the fruit to become mouldy. Diphenol is permitted on citrus fruit to the extent of 100 p.p.m. and O-phenylphenol 70 p.p.m. There are no requirements which necessitate the declaration of the presence of these substances upon retail sale in this country though this is required in Germany. In the course of investigations brought about by this complaint it was found that a few crates of oranges had been treated with a non-permitted preservative in the form of Thiobendazole. This substance is permitted in Germany but its presence on oranges according to the Preservatives and Food Regulations 1962 renders the fruit 'unfit for human consumption'. Since they were evidently fit for Germans the logical conclusion is that Germans could not be human! However reading further into the regulations it is found that if food is

treated with a non-specified or a non-permitted preservative it is a defence if that food was so treated in the course of storage e.g. in the course of transit in a ship's hold. Further even though thiobendazole is a non-permitted preservative it was found that the Ministry of Agriculture issue instructions for its use in the storage of food. This obviously produces a Gilbertian state of affairs! What is the use of condemning a batch of oranges as 'unfit for human consumption' if it is a defence to argue that they were treated with the non-permitted chemical! Ultimately it is obvious that in the end what is good for Germans is also good enough for the British. Perhaps entry into the Common Market will regularise such farcical situations.

Society today seems geared to the production of a large proportion of highly academically orientated individuals. In this statement I have avoided the word 'educated' for in a society bent upon the production of what would seem to be a superfluity of university graduates the stimulus of social responsibility in their teaching seems to be somewhat neglected. However having produced graduates of certain scientific erudition there appears to be insufficient niches in industry or commerce in which they may be fitted. The result of this is that many of these superfluous academics are deflected back into grant-aided university fellowships to carry out research and finally embellish themselves with a degree of Doctor of Philosophy; on the way, the findings of their research topics are published and if this research happens to be concerned with the pharmacology of additives used in food then often 'panic stations' are created. Such an occurrence happened concerning 'cyclamates', that artificial food sweetener said to be superior to saccharin because of the absence of the after-bitter taste. With indecent haste this substance was withdrawn from use in foods due to its suspected carcinogenic effects found as a result of American scientific research. Ultimately follow-up investigations failed to substantiate these findings and cyclamate has now been said to be innocuous. Nevertheless sufficient doubt

has been cast upon its use that it has not been reinstated as a permitted artificial food sweetener. Indeed it is doubtful if it would now be accepted by the ordinary person without misgivings. As a consequence of the 'saga of the cyclamates' it is somewhat disconcerting to read in the press at the time of writing this report that further American research has revealed that saccharin causes tumours in the bladders of the rat when fed at the rate of 5% in its diet. It has been calculated that at the same proportional rate of human intake of saccharin one would have to consume 875 bottles of soft drink per day. Undoubtedly with such a consumption death could result, but more likely from drowning or gale force flatulence rather than the carcinogenic effects of saccharin. If indeed the carcinogenic effect of saccharin is confirmed then according to the 'Delaney clause' in the United States food laws the use of saccharin in food would have to be banned. Probably European food laws will follow suit and if saccharin is banned, then we have no artificial sweeteners left; a not very enviable future for the sweet-toothed diabetic or figure conscious female!

A certain parallelism can be drawn with regard to Food Colours. The permitted colours are under constant revision and as from January 1st 1971 Ponceau MX was removed from the permitted list. Although adequate time had been allowed from the announcement of the withdrawal of this dye to the operational date of the ban, two samples were found to contain Ponceau MX, a raisin-flavoured cordial and canned English strawberries. Both commodities were removed from sale.

Two further samples contained non-permitted dye stuffs, but these were the result of decomposition of permitted colours. The Blackcurrant Health Drinks involved took on a most unhealthy green colour, and were reported as not being of the aesthetic quality desired. The reason for this change of hue was due to the use of an unsuitable red colour in this type of preparation.

## Foreign Matter in Food

The incidence of foreign matter in food can be classified into two categories, firstly the visibly obvious obnoxious objects which might include various items of ironmongery, insects, fungi, finger-bandages etc., and secondly a class which includes the invisible chemical contaminants, metals, pesticides etc., and bacteriological contamination.

The laboratory does not receive all cases of foreign objects in food since many are capable of being dealt with by the Food Inspectorate unless some specific identification work is required to be carried out. Thus the number of samples rejected in this category in this report does not truly reflect the magnitude of this problem; reference to the Chief Public Health Inspector's report will give a more realistic idea of such incidence.

The following notes deal with some of the more interesting samples rejected due to foreign contents.

### *Herbs and Spices*

In medieval days herbs and spices were greatly prized and valued perhaps more than they are today. It is said in the absence of food preservation much food consumed was highly spiced in order to mask the objectionable tastes of incipient putrefaction. After the examination of many of the herb and spice specimens submitted it would appear that not only would one mask objectionable characteristics by their use but the addition of many more would be accomplished. Most of the samples originated from warehouses specialising in the supply of Indian foods. It would appear that many of the immigrant users of these commodities are so used to their dirty and insect-ridden condition that they do not complain. The samples however, which consisted of coriander seed, cumin seed, fennel, telseed and ajwain seed, were infested with living mites, dead beetles, dead flies, bird droppings, rodent droppings, feathers etc. In all 27 samples of spices and 5 samples of rice were rejected.

Never have we dealt with such extensive and objectionable infestation in such samples, the amount of extraneous matter amounting in one sample up to 14.4% by weight. All the spice samples were declared unfit for human consumption. The rice consisted of 4 samples of Basmati rice, all contained dead beetles ranging from one to 50 in 12oz. samples and were declared 'aesthetically unacceptable and not of the quality demanded'. A further sample of Bagma rice which contained a large number of mites and other foreign matter was rejected as unfit for human consumption.

Six samples of herbs (3 thyme, 2 rosemary, 1 basil) whilst being normal specimens were found to be contaminated with faecal coliform bacteria. Whilst in well cooked foods this might not provide a great hazard such contamination could contribute towards the incidence of 'tummy troubles' and indeed does indicate that the hygienic quality of many of these products leaves much to be desired. One sample of thyme was found to contain zinc to the extent of 76.6 parts per million; this exceeds the Foods Standards Committee recommendation of a maximum of 50 p.p.m.

A sample of curry powder was rejected as unsuitable for edible purposes because of the presence of mould.

### *Condiments*

A sample of a spiced salt condiment was rejected since it was described as 'purely vegetable' and yet contained 55.4% of salt.

### *Fruit and Vegetables*

A sample of mushrooms was found to contain 34.2 p.p.m. of copper and 3.0 p.p.m. of cadmium, this amount was regarded as high, the copper content exceeded the 'recommended' maximum of 20 p.p.m. Further samples from later consignments proved to be acceptable.

A sample of peaches was submitted privately due to foreign matter adhering to the internal surface of the lid of

the can. This material had the characteristics of machine grease with gritty matter.

A complaint was received from a private person concerning glassy fragments of matter in a can of oranges. These proved to consist of particles of sodium hexametaphosphate. It was reported that though aesthetically undesirable these would not constitute a hazard to the health of the consumer. It was not possible however to tell whether the particles were present prior to opening the can, but if they were then their presence would constitute an offence under the Labelling of Food Order 1953 as the presence of this material was not declared in the list of ingredients. Further samples of the same brand failed to provide evidence of the presence of this substance.

A sample of dried apricots was found to be infested with mites—probably the Dried Fruit Mite (*Carpoglyphus lactis*).

Among samples examined for another local authority the following samples deserve mention.

'Adders fork and blind worm's sting

Lizard's leg and howlet's wing . . .

Shades of Macbeth were invoked by the presentation of a sample of grapefruit juice—truly a witch's potion containing foreign bodies in the form of a lizard and a spider. The parts of the lizard identified were, two forelegs, two hindlegs, a tail measuring 2 cm., two eyeballs and a certain amount of skin. From this information it was concluded that the lizard was approximately 2 inches long and complete in body before being processed in the can, the subsequent heat treatment being responsible for the disintegration of the reptile.

#### *Cereal Products*

A sliced loaf was rejected because of the presence of mould. A brown loaf was submitted with the allegation that it contained foreign matter. Microscopical examination revealed that the black particles, which initiated the complaint, had histological features typical of a seed coat other

than wheat. It was reported that their presence rendered the sample not of the quality demanded.

A biscuit was rejected because of the presence of a human hair.

Cornflakes in milk were submitted from a private person because of a very bitter taste. An Alkaloidal substance was extracted having the characteristics of quinine.

A buttered bread cob contained an insect having the characteristics of a bee. Microscopical examination revealed that the insect had bread-crumbs adhering to it indicating that it had been baked in the bread, an opinion confirmed by a negative phosphatase test carried out on a portion of the insect.

#### *Sugar Products*

A sample of sugar was submitted because of the presence of a brown powder. This powder was found to consist of starch grains and was ultimately found to originate from gravy powder. It was obviously a case of contamination in the home.

An ice lolly was submitted because of a 'bitter' taste. It was found to contain 0.5% of calcium chloride probably due to contamination with the refrigeration medium.

#### *Dairy Products*

Two samples of cheese were submitted due to the presence of foreign matter. One sample, a processed cheese was said to be gritty; this was due to the crystallisation of lactose due to faulty processing. A further sample of cheese spread contained a small piece of brown foreign matter.

#### *Miscellaneous Products containing foreign matter*

A sample of canned pilchards was submitted due to the presence of green slimy matter. Microscopical examination showed the presence of microscopic crustacea, nematoda and numerous types of unicellular and colonial Chlorophytes (green algae). The opinion was expressed that the

above-mentioned organisms were the contents of the alimentary canal of the Pilchard and indicated improper gutting before processing. The sample was rejected as being not of the quality demanded.

A sample of toothpaste was submitted due to the presence of an alleged rat dropping. Examination indicated that it consisted of a rubbery material which was the result of abrasion on the production machinery. A letter of thanks was received from the manufacturers for drawing their attention to this matter.

#### **Foods of defective composition (Other than Dairy and Milk Products)**

##### *(a) Meat and Fish Products*

Shredded Beef Suet is controlled by the Food Standards (Suet) Order, 1952, which prescribes a minimum fat content of 83%. Sample No. 1359 was found to contain only 71.6% of fat.

Under the Canned Meat Regulations, 1967, a product described as 'Meat Roll' must contain a minimum of 65% of total meat, whereas sample 323 described as Ham Roll with Chicken contained only 59.7% of total meat.

A deficiency of 2.7% of the required meat content was found in sample No. 1182, Chicken Fillets in Jelly. This product is required to contain not less than 80% of chicken, whereas only 77.8% was detected.

The Fish and Meat Spreadable Products Regulations, 1968, came into force upon 15th March, 1971. These regulations now require meat pastes to contain not less than 70% of meat (formerly 55%), bringing these products into line with the fish requirements of fish pastes (70%). 'Potted' meat products are required by the same regulations to contain not less than 95% meat and to contain no cereal binder. During 1971, four samples of beef paste were adversely reported upon due to meat deficiency, these deficiencies ranging from 6.7% to 15% of the required 70% meat content.

Three samples of Potted Beef were similarly rejected due to deficiencies of meat ranging from 3.8% to 9.5% of the required 95% beef content.

#### *Sausages and Sausage Products*

In contrast to many of my Annual Reports, this year only one sausage sample was criticised due to low meat content; sample No. 796, a Pork Sausage, contained only 62.2% of total meat, equivalent to a deficiency of 4.3% of the required minimum 65%.

Scotch Eggs traditionally consist of hard-boiled eggs coated with Pork Sausage Meat. Pork Sausage Meat is subject, as mentioned above, to a minimum meat content of 65%, whereas the meat contents of the coatings of Scotch Egg samples 1172 and 1206 contained only 35.6% and 40.3% of meat respectively.

#### *Fish*

It is now possible for us to differentiate and identify fish species by a process known as Disc Electrophoresis, in which the proteins of the fish produce characteristic patterns. A sample of haddock was submitted which gave a pattern characteristic of the fish known as 'coley'. It was declared 'not to be of the nature demanded'.

#### *Soft Drinks*

The popularity of drink consisting of beer and lemonade or ginger beer, and commonly known as 'shandy' or a derivation of such description, has increased since the advent of the 'breathalyser'. It is now sold as a canned or bottled product and provided the alcohol content is kept below 2% proof spirit, (i.e. 1.14% of ethyl alcohol) it is classed as a soft drink and so is permitted to be sold from unlicensed premises. However, if the beer content of this product is decreased so as to ensure that the product does not infringe the excise regulations the character of the product becomes debased. According to the Labelling of Food

Order, 1970, such products bearing the designation 'shandy' or some derivative thereof must have a minimum strength of 1.5 per cent. proof spirit. Obviously then, if a manufacturer wishes to sell his product from unlicensed premises and to persons under 18 years of age he must ensure that his product contains alcohol between the limits of 1.5 and 2.0% proof spirit. Four samples of shandy were rejected due to low alcoholic content, these ranged from 0.81% to 1.32% proof spirit. All manufacturers were notified of these discrepancies and in all cases except one took steps to rectify the matter. The exception, not a local producer, adopted the attitude that until the Labelling of Food Order 1970 came into operation (1st January 1973) he was entitled to sell a product which abused the description 'shandy'!

Indian Tonic Water is required to contain not less than half a grain of Quinine Sulphate per pint, whereas sample No. 94 contained only 0.41 grains per pint, thus rendering the product deficient of 18% of the minimum required Quinine Sulphate content. The reason for this deficiency was probably that the bottle had been exposed to sunlight which has the effect of decomposing quinine.

#### *'Hi-Protein Bread'*

High-Protein Bread is defined in the Bread and Flour Regulations 1963 as bread containing not less than 22% of protein calculated by weight upon the dry matter. Sample No. 445 contained only 17.8% of protein so calculated and was therefore reported as being 19.1% deficient of the minimum required protein content and thus not of the quality demanded.

#### *Cheese Crispbread*

This sample (No. 806) was stated to contain 25 calories per slice whereas analysis indicated a calorific value of 29.4 calories per slice. Communication with the manufacturers indicated that the slices were heavier than they should have been due to discrepancies in control of production.

#### *Dried Mixed Vegetables*

This sample (No. 1539) was stated to contain French Beans but investigation revealed a lack of beans and the presence of undeclared cabbage!

#### *'Bio Salt'*

That folks are prepared to pay 15 pence (3 old shillings) for 12 ozs of salt is incredible. Such was the cost of 'Bio Salt' sample 792. No doubt that part of the cost was due to the care and accuracy with which this product was compounded since it was described as 'A perfectly biochemically balanced and harmless compound salt'! Harmless it might have been but analysis did not confirm the 'perfect balance' since it was 50% deficient of the declared calcium content (200mg/1 oz), 64% deficient of the declared Iron content (0.25mg/1 oz) and 16% deficient of the declared Phosphorus content (90mg/1 oz)

I do not understand who decides on the 'perfect balance' of these ingredients! If such perfect balance is needed then a specific dose should be stated, for how big is a 'pinch of salt'? Also should not the calcium, iron and phosphorus contents of other articles of diet be taken into consideration. A drink of milk will provide a greater calcium and phosphorus intake than a pinch of this salt! Communication with the manufacturer indicated that inability to obtain the usual additives had resulted in an imbalance of formulation!

#### *Defective Labelling*

Several samples of so-called 'Enriched Bridge Rolls' were analysed and produced analytical data which was not markedly different from ordinary bread. The opinion was therefore expressed that unless the description 'Enriched' is properly defined in that the manner of enrichment is disclosed to the purchaser such description is misleading. This opinion was based upon section 16 of the Bread and Flour Regulations 1963 which prohibits the advertisement of

bread in any words, desire or description which is calculated to indicate either directly or by ambiguity, omission or inference that the bread is 'rich' in milk, skimmed milk or milk solids. Whilst no mention of any particular ingredient was made regarding these rolls it would seem that only the gullible would accept the fact of 'enrichment' without knowing in which manner the product was enriched. It was somewhat surprising therefore to receive a letter from the bakers—a very large firm, saying, 'It would be helpful if the Analyst would indicate his requirements for acceptance of the term 'enriched' when applied to a product'! This was felt was adequately expressed in the opinion given on the certificate as indicated above. It was also pointed out that the Labelling of Food Regulations 1970 will not permit the mention of any specific ingredient on a label unless they are included in a list of ingredients in order of magnitude. The obvious resolution of this difficulty was to abandon the superfluous and apparently unjustifiable description 'Enriched' altogether or give a list of ingredients and declare the manner of enrichment. The firm decided to adopt the former solution.

No doubt entry into the Common Market with its implicit closer connections with Europe will bring on to the British market many foodstuffs of European origin. Obviously unless our labelling regulations are integrated with European regulations there will be many instances of non compliance with British requirements. Already some instances have occurred. A Pizza Flour was rejected because it contained Propionic Acid. The opinion was expressed that, 'Propionic acid is permitted as a preservative in bread and flour confectionery but as the sample is not covered by the definition of these commodities it is considered that propionic acid is not a permitted preservative in this particular commodity'. Also the presence of the preservative should have been declared in the list of ingredients.

In delightfully fractured English the opinion was logically stated in the following terms.

"You stated that 'sodium propionate is permitted as a preservative in bread and therefore we think that it should be permitted also for pizzas because pizza flour is considered like bread flour. In fact Italian laws permit addition of 'sodium propionate' both for bread-like products and similar and flour confectionery.'"

It was therefore pointed out that the definition 'flour confectionery' only includes products complete in themselves and suitable for consumption without further preparation or processing other than heating. Therefore although according to our laws a finished cake or bun can contain propionate, a cakeflour is not permitted to do so. This odd situation was followed up by the reply:

'For Italy and the other countries of MEC, these distinctions does not make, since the one corresponds to the other.

We are sending goods in England and we are impelled by necessity to follow your advises . . . '

No doubt such Italians must think the English are an illogical lot, but I only wish my fractured Italian was as good as their English! Actually however the apparent illogicality is not really so ridiculous for we English permit this preservative (anti mould) in the made-up shop article but not in the do-it-yourself mix since these home-baked products are meant to be consumed without undue storage!

Another European article was labelled entirely in French. The article Crevettes would have meant more to an Englishman if it had been labelled 'Shrimps'. Any article not labelled in English does not conform to the requirements of the Labelling of Food Order 1953.

Sample No. 704 was labelled 'Beefburger Savouries' but was a meatless product. Only on the bottom of the box was the product labelled "15 beefburger flavour savouries", all references to the product upon the five major surfaces of the pack omitted the word 'flavour'. The product was considered to be labelled in a manner calculated to mislead the purchaser.

Ice Cream is required to contain no fat other than milk fat unless the words 'contains non-milk fat' appear in immedi-

ate proximity to the description 'ice cream'. The labelling of the main faces of the carton of sample No. 831 contravened this requirement in that the product was labelled 'Vanilla Ice Cream', with no reference to non-milk fat. It was rather surprising to consider a large national company disagreed with the above-mentioned requirement and stated, 'The Regulations do not specifically require the phrase "contains non-milk fat" to appear next to the description "Ice Cream" wherever it appears. The requirement is that the declaration should appear in "immediate proximity to such description" and we believe that our packaging complies with this'. In my opinion if the required words 'contain non-milk fat' do not appear in immediate proximity to the main label of the product this is tantamount to flouting the law, and merely reduces such labelling requirements to a mockery. The Dried Milk Regulations, 1965, lay down specifications for the size of lettering to be used in the approved declarations on containers of dried milk. In Regulation 5, Schedule 2, para. 3 (5), it is stated that the words 'not to be used for babies' shall be printed in letters not less than twice the height of the rest of the approved declaration, whereas on the container of sample No. 893 the printed letters were  $\frac{3}{16}$  inch and  $\frac{3}{8}$  inch high respectively. In addition to non-compliance with labelling requirements this sample also contained brown particles of charred milk rendering the product not of the quality demanded.

A further technical infringement of the Labelling of Food Order 1953 was made in the labelling of a Thick Pea Soup Mix in that the term 'dried vegetables' was used in the list of ingredients. The designation 'dried vegetables' is not an accepted generic description permitted in Schedule I of the Labelling of Food Order 1953, the variety of the dried vegetables must therefore be specified.

Stuffed 'Vine leaves (Dolmas) were submitted with a list of ingredients as follows: 'Vine leaves, Rice, Salt, Olive Oil, Onions, Spices with Genuine Olive Oil'. Since the salt content was 1.5% and the olive oil was 4.9% the list of

ingredients was obviously not in the quantitative order as required.

### Toxic metals

In recent years there has been much concern in the national and world press regarding the occurrence of toxic metals as contaminants of foodstuffs and the environment. Much of this concern stems from a realisation that with increasing industrialisation pollution of man's environment and indeed of the Earth's biosphere, is increasing. Much of this pollution could be avoided if the necessary avoidance costs were absorbed in the cost of the articles or services provided. However, the economic necessity of meeting competition has resulted in cost cutting and the obvious place for this saving, especially in the past has been in dealing with undesirable by-products of industry. Thus the eyesore of slag and waste heaps in mining areas has been accepted. These blots on the landscape need never have happened if the cost of disposal had been included in the cost of the product. Less obvious is the disposal of industrial wastes, sewage, etc., into streams and rivers, but the deterioration of the quality of the environment and life in general is the result of such irresponsibility. Slowly wild life, animal, fish, fowl and plant life has in many cases been affected or eliminated. At last people, government and local authority have been made aware of the problems and their awareness has in many cases been due to a certain sensationalism created by anti-pollution campaigners. It is, however, to be deprecated that certain scientists seem bent on creating undue public concern thereby causing unnecessary apprehension with regard to the use of certain pesticides, artificial sweeteners and the distribution of toxic metals. Probably they justify their pronouncements by the necessity to shock authority into dealing with what is truly a national and world problem which could affect the health and well-being of every person. However, after such sensational statements, subsequent follow-up investigation has often

proved that concern has been based upon erroneous research or even lack of knowledge of the kind of environment that has always existed. Is it noteworthy that many of these panics originate from American research? Can the conditions of the research problem truly be related to actual living conditions? These facts, in my opinion, should be answered before resorting to statements causing unnecessary public apprehension and concern.

In justification of this opinion, the instance of the occurrence of Mercury in Tuna fish may be quoted. The sale of this commodity was drastically reduced by the announcement that this fish was highly contaminated with Mercury. This Mercury scare did indeed prove that officialdom can sometimes be roused to a quicksilver activity, for within a week the Government Chemist had confirmed the presence of Mercury in tuna-fish, but not in amounts to justify its withdrawal from sale. Nevertheless, the sales of tuna fish had been depressed and the housewife still regards that tin of tuna on the super-market shelf with an aura of suspicion. The sequel to this tale is that analysis of preserved tuna caught in the 1800's also had its quota of Mercury, and a recent analysis of Mastodon remains would equally be inedible because of its quicksilver quota! The true fact is that little knowledge was available regarding the natural Mercury content of tuna fish, and so true comparison with recent evaluation was not possible.

Cadmium is another metal which has also recently caused concern. Like Mercury, irresponsible industrial activity in Japan focussed attention upon the toxic effects of this metal. Massive quantities polluted drinking water and rice paddies resulting in acute cadmium poisoning of the local inhabitants of the river into which the residues from mining and industrial activity was allowed to flow. The resultant symptoms of these unfortunate people was a crippling disease with painful bone deformities such that the condition is referred to as 'itai-itai' disease—a Japanese expression meaning 'it hurts'. From this condition some

indications were drawn that cadmium has some effect in heart condition, and so much attention has recently been focussed upon cadmium in the environment. There can be no doubt that cadmium is a toxic metal, but until the recent developments in the technique of Atomic Absorption Spectrophotometric methods for the determination of trace metals, few determinations of cadmium in foods or soils had been carried out. Since the acquisition of the necessary instrument, several hundred foods and soils have been examined for cadmium in our laboratory. Levels up to 1 part per million appear to be usual with higher amounts—up to 4 p.p.m. in crab. Many soils have also been examined for cadmium, reference to which is made later in a report upon the Beaumont Leys Farm soils.

Many ponderous pronouncements have recently been produced by certain academics regarding the toxic effects of lead. For many years lead has been known to be an accumulative poison, not readily eliminated from the body so that the regular intake of small amounts could finally result in chronic lead poisoning. For this reason, for the past 20 to 30 years, little lead piping has been used in drinking water systems and plastic pipes have replaced all the old beer systems in public houses which did contribute much to adult male lead poisoning cases in Leicester several decades ago. In recent years, however, it has been stated in medical circles that traces of lead can affect brain development in babies, a pronouncement which resulted in the Toys Safety Regulations, 1967 in which the lead content of the paint film used on toys is limited to a maximum of 5,000 parts per million (0.5%). Many cases of lead poisoning in babies have indeed been due to the nibbling of paint on cots and toys, and it is imperative that youngsters should be protected from such a hazard. However, lead is a metal so widely used in many ways that it has become a ubiquitous pollutant.

Lead is used in the form of tetra ethyl (or methyl) lead as an anti-knock agent in petrol. Without its use the modern

high performance high-compression internal-combustion engine would not run efficiently unless more costly fuels were used. Leaded petrol is permitted by British Standard Specification No. 4040 to contain up to 3.8 g of lead per gallon. All this lead content is emitted in the exhaust fumes of the motor-car in fine particulate form into the atmosphere, eventually being precipitated as dust over the countryside. Ultimately it is washed by rain into the sewers and finishes up as a constituent of sewage sludge.

During 1956 investigations were carried out by the University of Wales at Sutton Bonington and High Marnham in Lincolnshire, to determine trace metal contents of atmospheric dust. At Sutton Bonington not less than 2,000 p.p.m. of lead was found, whilst in the rural district of High Marnham, 1,200 p.p.m. was recorded. These facts, together with the concern regarding heavy metals in Beaumont Leys Farm soils initiated an investigation into the lead contents of children's blood, carried out with the co-operation of Dr. Simpson, (Paediatrician at the Leicester hospitals). Samples of blood made available were analysed for lead content with the following results expressed in histogram form. Blood lead concentration are plotted against numbers of samples.

It will be seen that very few samples contained more than 30 micrograms of lead per 100 mils; indeed the majority contain 10–14 micrograms per 100 mils. These figures compared with 80 micrograms per 100 mils, above which clinical symptoms of lead poisoning are said to be imminent, would indicate a satisfactory state of affairs in Leicester. Satisfactory, but obviously whilst there is lead in the atmosphere which need not be there except for man's mismanagement, one cannot say there is no need for concern.

Much concern has been expressed regarding the toxic metal concentrations in the soils of the old City Sewage Farm known as Beaumont Leys. As a consequence much work is being done by the City Analyst's staff on this problem.

Concern was initiated by the Ministry of Agriculture

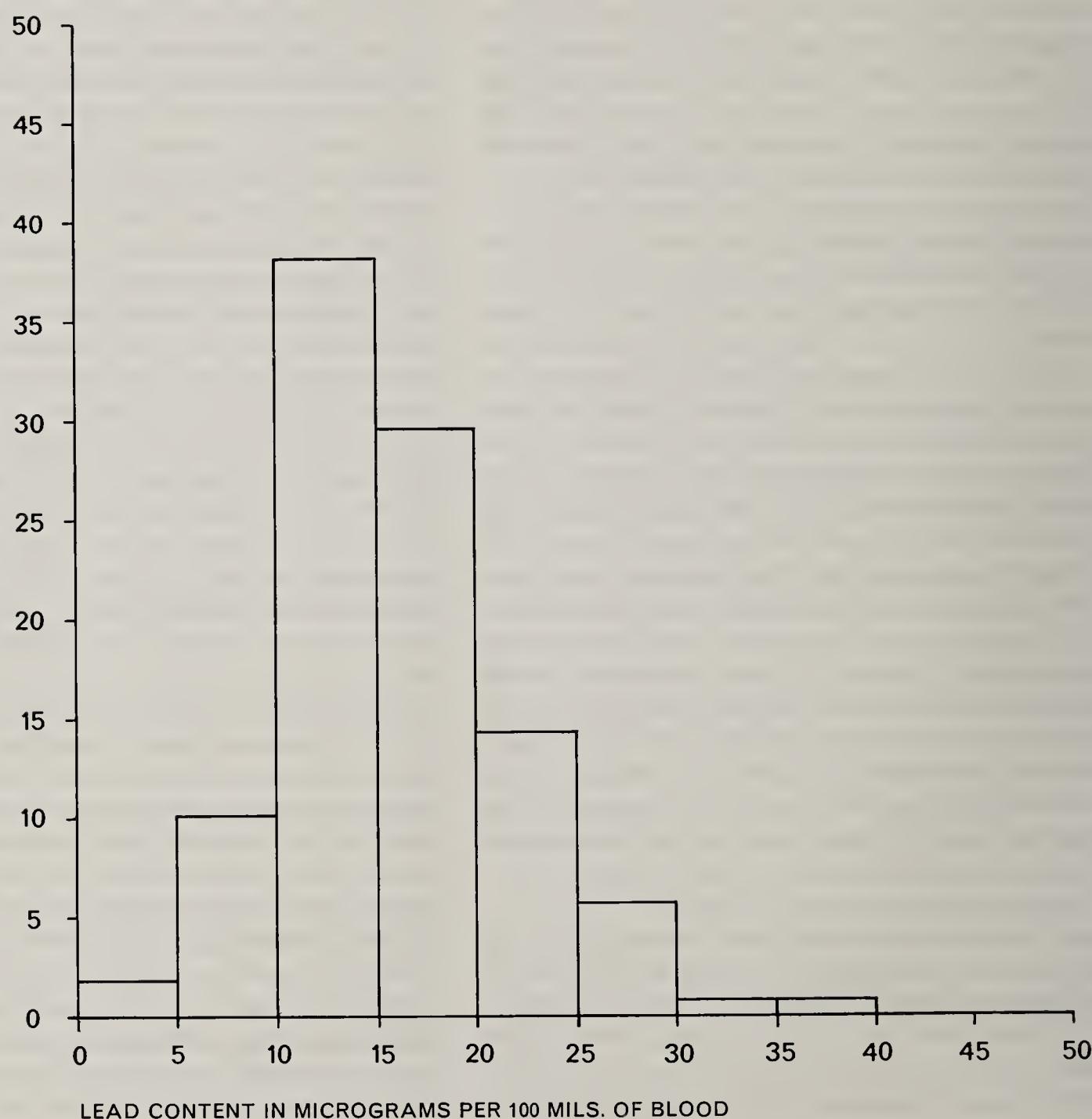
Advisory Service (M.A.A.S.) who were primarily concerned with plant toxicity (phytotoxicity) of the soil. This toxicity is expressed in terms of 'zinc equivalent' and embraces values for zinc, copper and nickel, being calculated from the formula  $\text{Zinc Equivalent} = \text{Zinc} + 2 \times \text{Copper} + 8 \times \text{nickel}$  in terms of parts per million of these metals in the soil. In this zinc equivalent formula, twice the amount of copper (in p.p.m.) and eight times the nickel is included since these metals are reputed to be respectively 2 and 8 times as toxic as zinc towards plants. A maximum value of 250 was stated, whereas values ranging from 500 to 5,000 and more were obtained from the Beaumont Leys soil. Concern regarding safety was therefore justified and this concern was considerably increased when zinc contents of cereals and other plants were stated to be in excess of the recommended maximum of 50 p.p.m. Subsequently investigation showed that the values issued by the Ministry were calculated upon dehydrated samples and not on the food stuffs as consumed. Ministry concern was however, with plant toxicity rather than animal poisoning, and no figures were available for metals such as lead, cadmium, arsenic and mercury. The laboratory was therefore presented with the task of evaluating the problem of safety of this land as a potential building site.

Initially some 34 samples were submitted for examination, these samples consisting of topsoil and subsoil (18" depth) from 17 locations on the so-called 'Pilot Development' site. These were analysed to determine whether deep ploughing would mix the soil sufficiently to reduce the toxic metal content. The results showed that even at 18" depth the metal contents were of the same order as in the topsoil and thus deep ploughing would not help reduce the problem.

Obviously the danger lies not in the zinc, nickel or copper content of the soil, but whether sufficient of these metals would be absorbed in the edible crops grown upon the soil. Also it was realised that although zinc and copper can be poisonous to humans, they are self eliminating in that they

**DISTRIBUTION OF BLOOD-LEAD CONCENTRATIONS OF  
LEICESTER CHILDREN DURING 1971**

NUMBERS  
OF SAMPLES  
EXAMINED



cause sickness and diarrhoea and are thereby expelled from the body, whereas cadmium and lead are not. Thus cadmium and lead and also mercury and arsenic had to be considered. At the time these examinations were called for there was little time to raise crops upon the soil, but vegetation was gathered from the site and comprehensive analyses performed. The results showed that whilst green crops tended to take up a little more zinc than controls obtained from other places, root crops (potatoes especially) showed

no abnormal concentration of heavy metals. Indeed the results shown below relating to potatoes show almost identical metal contents. Investigation showed that there was no need for undue concern relating to toxic metal contents in the plants examined. However, since no salad or leguminous crops were examined, it was considered it would be unrealistic to assume complete safety until such samples had been grown upon the soil and analysed. Such investigations are being organised in the current year (1972).

#### Toxic Metal Contents of Potatoes (in p.p.m.)

|  | Zinc | Copper | Nickel | Chromium | Lead | Cadmium |
|--|------|--------|--------|----------|------|---------|
| a Grown on Beaumont Leys                 | 3.50 | 1.40   | 1.60   | 0.04     | 0.26 | 0.06    |
| b Other samples from general retail sale | 3.00 | 1.00   | 0.90   | 0.09     | 0.30 | 0.06    |

Following a report from a Medical Officer of the Department of Health and Social Security, much greater concern was placed upon lead and cadmium contents in these soils, whilst investigation into arsenic and mercury contents were also called for. A comprehensive and detailed analytical programme on the whole 1,800 acre site is at the present time being carried out. It is, however, already apparent that the area can be classified into two categories: (a) an area subjected mainly to effluent irrigation and (b) the area used for sludge spreading. The latter area in general carries a greater burden of toxic metallic contamination, the contamination from lead appears to be of greatest concern and so calls for more detailed comment in this report. In the effluent irrigation areas, lead content is more concentrated at the immediate points of the irrigation outlets, but overall the lead content is generally not greater than 300 parts per million, with much of the area being less than this content. In the sludge spreading areas, the greatest amounts of lead so far determined are approximately 2,000 p.p.m., but these quantities would appear to be restricted to an apparently well defined and comparatively small area. These figures should be compared with a natural

lead soil content of up to 300 p.p.m. Analysis of surrounding soils in the Charnwood area would indicate a natural lead content of up to 50 p.p.m.

However, having determined total lead contents of the soil, one should consider a factor which has been overlooked by a number of 'experts' who by virtue of academic status in faculties far removed from toxicology, seek to air their views and pontificate upon the dangers of lead. The sequel to such pronouncements has been to cause a certain amount of what might be unnecessary alarm especially to parents of young families. Having obtained values of total lead contents of soils, one must determine if the lead is 'available' in toxic form. It is this factor which experts so quick to come to a decision have not appreciated. As regards uptake of lead into plants, one must consider whether that lead is fixed in the soil or can be rendered soluble under conditions of plant growth and so made available to the plant. Determinations so far made in our laboratory concerning several hundred soil samples, indicates that the lead is rendered insoluble by combination with the organic matter of the soil. Values of 'available' lead in sludge spreading areas are of the order of 10 p.p.m.,

maximum values being about 14 p.p.m. In effluent irrigation areas values of the order of 3 p.p.m. are general. Compare these values with the total lead contents indicated above (i.e. 2,000 p.p.m. in sludge areas and 300 p.p.m. in effluent areas) and a true indication of the danger due to lead in the soils in their present condition is given.

Perhaps the moral provided here is that whilst it would be imprudent to neglect a situation likely to become a potential public health hazard, a scientist is imprudent to make 'expert' statements which do not consider all the likely factors involved in a situation.

#### *Novel Protein Products*

Reference is made to novel proteins in the legal section. Ministerial interest in these products, which are comparatively new on the United Kingdom market, is evident by the fact that a review on such materials has been initiated.

There is some misconception regarding these products since in the lay mind they are looked upon as synthetic matter, and not therefore as wholesome as good 'red meat' which the products often are made to simulate. The word 'synthetic' is not a fair description since the basic ingredient is natural protein. It so happens that the protein of the soya bean or field bean is best suited for the texturising process, but other proteins can be used or blends prepared to produce products containing the desired proportions of the various amino acids. This texturising, in one process consists of extruding the protein matter into fibres which are hardened in a coagulating bath; the fibres when bunched together simulate the structure of meat and require a convincing amount of mastication before being swallowed and hence give the 'chewability' characteristic of meat. Meat, however, is not the only guise in which this vegetable protein can be presented to the consumer, and good simulations of cheese have been prepared. It is a pity that this protein food has to be presented to the public for consumption in the guise of an already known product, for it

then becomes accepted as a substitute for the genuine article and not as a product in its own right. Protein is a necessary food and in the form of meat, an exceedingly expensive one. These novel proteins have low cost compared with meat since an acre of land can produce 800,000 calories in terms of plant protein, but only 200,000 calories from animal protein. One must also take into consideration that foods prepared from textured vegetable proteins are more consistent in quality than meat which is often uneatable because of the presence of unacceptable amounts of sinew, gristle or fat, or just because it is too tough to eat. It is therefore feasible that textured vegetable protein offers possibilities of producing good quality foods high in protein content and comparatively low in price; an ideal combination to cater for the needs of the less affluent sections of society such as elderly pensioners, large families etc.

The use of these simulated products, however, does pose certain problems with regard to British Food Law. If used as an ingredient in meat products, those meat products must still contain the stipulated amount of meat. Thus a pork sausage must still contain 65% of pork, a meat pie 25% of meat, and so on, the vegetable protein is only permissible as an extra ingredient and not as a substitute for real meat. The possibility that small businesses and catering companies might use texturised vegetable protein as a cheap substitute for meat has tended to derate this promising food material from the status which it truly deserves as a highly nutritious and relatively low-cost food, capable of presentation in a variety of attractive dishes.

During the year specimens of spun texturised vegetable protein prepared from the field bean, coloured and flavoured to simulate beef, were examined for the Central Purchasing Department, the object being to investigate its acceptability for school meals. As part of this examination, a 'meat' pie was prepared and served to the unsuspecting laboratory staff who savoured its delights with relish and without complaint—possibly a compliment to the cook! Analytical

comparisons with beef showed that the vegetable protein was of comparable value, but no doubt much prejudice must be overcome before these 'novel proteins' are accepted as the foods they are in their own right. However, time will tell—margarine is now respectable, indeed preferred by some to butter!

#### *Road Safety Act, 1967*

Persons apprehended under this Act are provided by the police with a part of the specimen of blood or urine which they are obliged to supply. This laboratory provides a service whereby such persons may, on payment of a fee of £6.30, have such samples examined for the content of alcohol. During 1971, 225 specimens of blood and 6 of urine were examined.

The limits of alcohol prescribed under the Act are 80mg/100ml. of blood and 107mg/100ml. of urine. The levels of alcohol found in the samples are summarised below:

| <b>Blood Samples (225)</b>    |                           | <b>Urine Samples (6)</b>      |                           |
|-------------------------------|---------------------------|-------------------------------|---------------------------|
| <i>Alcohol<br/>mg-100 ml.</i> | <i>No. of<br/>samples</i> | <i>Alcohol<br/>mg-100 ml.</i> | <i>No. of<br/>samples</i> |
| Below 80                      | 53                        | Below 107                     | Nil                       |
| 80 – 100                      | 19                        | 107 – 150                     | 1                         |
| 100 – 150                     | 42                        | 150 – 200                     | 2                         |
| 150 – 200                     | 35                        | 200 – 250                     | 1                         |
| 200 – 250                     | 19                        |                               |                           |
| 250 – 300                     | 6                         |                               |                           |
| Over 300                      | 3                         |                               |                           |
| Unacceptable samples          | 2                         |                               |                           |
| Unwilling to pay fee          | 46                        | Unwilling to pay fee          | 2                         |

It is gratifying to record that 22.9% of persons submitting their specimens were afforded the mental relief undoubtedly suffered on such occasions.

## Atmospheric Pollution

During the year, daily readings of atmospheric smoke and sulphur dioxide concentrations were carried out at four sites in the City. The meters are located at the Water Department, Nedham Street, South Fields Library, the Engineer's Department, Grey Friars, to all of whom our thanks are due for housing the apparatus. A further meter is maintained at Midland House, and we are grateful to the Smoke Control Department for their co-operation. The apparatus at Wanlip has also continued in use. The annual average figures are given in the table below:

|  | Site | Nedham Street | South Fields Library | Grey Friars | Midland House | Wanlip |
|--|------|---------------|----------------------|-------------|---------------|--------|
| Average Smoke Concentration (micrigrams-metre <sup>3</sup> )           | 1971 | 45            | 35                   | 51          | 53            | 35     |
|  | 1970 | 52            | 34                   | 46          | 54            | 29     |
| Average Sulphur Dioxide Concentration (micrograms-metre <sup>3</sup> ) | 1971 | 123           | 75                   | 152         | 117           | 39     |
|  | 1970 | 119           | 72                   | 153         | 132           | 26     |

It can be seen from the annual figures that the situation remains very much as it did last year. The levels of sulphur dioxide in the City Centre are still considerably higher than those for smoke, due to the use of Smokeless fuels, which still produce sulphur dioxide although they do not produce smoke.

Monthly determinations of tar, ash, soot and other deposit continued to be made at three sites, namely the Town Hall, the Emily Fortey School and the City General. We thank those who allow us to maintain these sites.

The annual results are summarised in the following table:

| Deposited Matter         |           |       |             |      |              |       |
|--------------------------|-----------|-------|-------------|------|--------------|-------|
|                          | Town Hall |       | Emily Forte |      | City General |       |
| (tons-sq.mile per month) | 1970      | 1971  | 1970        | 1971 | 1970         | 1971  |
| Tar                      | 0.04      | 0.04  | 0.03        | 0.02 | 0.03         | 0.02  |
| Ash                      | 2.21      | 2.41  | 1.38        | 1.21 | 1.74         | 1.73  |
| Soot                     | 6.91      | 7.66  | 2.61        | 2.67 | 3.06         | 4.64  |
| Soluble deposit          | 4.98      | 5.01  | 3.77        | 3.59 | 3.80         | 3.87  |
| Total deposit            | 14.14     | 15.12 | 7.79        | 7.49 | 8.63         | 10.26 |

### Fertilisers and Feeding Stuffs Regulations

66 samples were submitted during the year, consisting of 16 feeding stuffs, of which 3 were rejected, and 50 fertilisers, of which 14 were rejected, making a total rejection rate of 26% a rather higher figure than that of 1970. Details are shown below in the table.

Under the Fertilisers and Feeding Stuffs Regulations, limits of variation are laid down for the declared constituents, and we are obliged to reject the sample if the analysis falls outside these limits even if we do not consider that the purchaser is being prejudiced.

#### Fertilisers

| Type   | No. submitted | No. rejected | Remarks   |
|--|---------------|--------------|---|
| Sulphate of Potash                               | 2             | .            | .   |
| Bonemeal   | 3             | .            |   |
| Hoof and Horn                                    | 5             | 4            | Samples 3, 18, 25, 26 all contained excess nitrogen.<br>Sample 26 also contained live beetles.  |
| Dried Blood                                      | 2             | .            | .   |
| Nitrate of Soda                                  | 2             | .            | .   |
| Superphosphate                                   | 1             | .            | .   |
| Sulphate of Ammonia                              | 1             | .            | .   |
| Nitrochalk                                       | 1             | .            | .   |
| Compound fertiliser in tablet form               | 2             | .            | .   |
| Lawn fertiliser                                  | 2             | .            | .   |
| Liquid fertiliser (incl. liquid lawn fertiliser) | 10            | .            |   |
| Compound fertilisers: Rose fertiliser            | 3             | 1            | Sample 40, deficient in soluble phosphate, also excess nitrogen.  |
| Chrysanthemum fertiliser                         | 2             | 2            | Sample 53, excess potash.<br>Sample 63, reversion of phosphate, also excess potash.   |
| General fertiliser                               | 14            | 7            | Sample 17, deficient in potash.<br>Sample 21, labelling offence.<br>Samples 27 & 28 reversion of phosphate.<br>Sample 51, excess insoluble phosphate.<br>Sample 52, deficient soluble phosphate.<br>Sample 62, deficient soluble phosphate. |
| Totals   | 50            | 14           |   |

#### Feeding Stuffs

| Type          | No. submitted | No. rejected | Remarks   |
|---------------|---------------|--------------|---|
| Poultry Foods | 11            | 2            | Sample 55, excess of oil.<br>Sample 58, deficient in fibre. |
| Pig Foods     | 5             | 1            | Sample 9, excess protein.                                   |
| Total         | 16            | 3            |   |

## Consumer Protection and Trades Description Samples

These samples were submitted by the City of Leicester Chief Public Protection Officer or the County Consumer Protection Officer under the Consumer Protection or Trades Descriptions Acts.

For the City Public Protection Officer the following samples were examined:

### *Petrols, Fuels etc.*

98 samples of petrol were examined for verification of their star ratings (octane numbers), 2.2 of which were submitted as control samples. 4 samples received adverse reports: a 4 star sample was judged to be not more than 3 star quality: a 5 star was only 2 star whilst from this garage a 2 star petrol gave a 5 star rating—an obvious error on the part of the person supervising the filling of the tanks. A further sample reputed to be a 4 star petrol consisted of 98% water containing a trace (30 p.p.m.) of an anionic detergent.

A two-stroke, I.C. engine fuel was examined for lubricant content and was found to contain 5% oil. A sample of White Spirit was found to conform to the appropriate British Standard Specification (B.S. 245: 195.6) and 3 paraffin samples satisfied the requirements of B.S. 2869: 1970.

Of eleven samples of distilled water obtained from garages no fewer than 8 were rejected as unsuitable for use in lead-acid accumulators. Five of these samples consisted of a proprietary brand of 'Battery Top-up', three of which contained solid microcrystalline deposits of calcium carbonate in the plastic containers and up to 1.8% of dissolved matter consisting essentially of calcium and sodium bicarbonates. The samples were rejected as being 'particularly detrimental to lead-acid batteries'.

A car radiator antifreeze was found to contain anti corrosion agents typical of both British Standard A and C type antifreezes. The B.S. specification does not advise the mixing of these inhibitors.

Six samples of preparations used for car body finishing were examined, some due to alleged failure in use and some due to extravagant claims and cost. All samples appeared to be adequate if used precisely according to instructions though it is doubtful if the high costs of some of them could be justified.

Following a complaint of lack of grit in a sample of John Innes Compost (No. 3) four samples were examined for sand content and added nutrients. All specimens appeared to satisfy the specification for John Innes compost (No. 3).

Two wig samples were found to be constructed from human hair as claimed.

Following a complaint regarding the performance of a so-called 'Lustre Polish' obtained from an exhibition two samples were examined. Both consisted of a mixture of an acidic aqueous phase and an organic hydrocarbon liquid phase. The organic phase was composed of a mixture of kerosene and liquid paraffin type hydrocarbon oils in the appropriate ratio of 1 to 2 respectively.

One sample contained approximately 60% of aqueous phase whilst the other contained 30%.

On drying both samples left an oily film which was not absorbed on non-porous surfaces. The polish was judged to be unsuitable for leather and unacceptable in performance.

A sample of vinyl-coated wallpaper proved to be an interesting investigation. The purchaser complained that the paper was not of the quality of the pattern chosen and indeed examination by the technique of attenuated total-reflectance infra-red spectrophotometry it was shown that the paper was inadequately coated with the vinyl finish.

A reputed 'gold' chain, each link marked 18 CT was submitted for verification. The opinion was formed that it was made from brass since its specific gravity was only 8.7 whereas gravity of 18 carat gold (gold-copper alloy) is 16.6.

One packet of coloured pencils and 5 toys were examined for toxic metal contents. All were reported satisfactory.

Four boxes of 'safety' matches were examined and reported as dangerous since when struck a minimum of 25% of the matches ignited explosively such that burning particles were projected from the head of the struck match. The real danger of hot particles entering the eyes or burning the face, hands or clothing of the user could not be ignored.

A Cushion from a new settee was examined because of a complaint that it was dirty. Black particles were observed microscopically which had the characteristics of coal dust. It was significant that the purchaser of the settee was a coalman.

A complaint regarding the strength of a household bleach was not substantiated; it was found to contain 4.9% of available chlorine, whereas normal household bleach contains approximately 5% of available chlorine.

Four varieties of cosmetics were examined following a complaint that irritation of the skin resulted after use. In the case of the skin lotion which had a pH value of 9, that is it was excessively alkaline it was considered the complaint was justified.

Four 'bread' samples were examined to ascertain whether these specimens came within the designation of 'bread' according to the Bread and Flour Regulations 1963. All contained caraway seeds which is a permitted ingredient under the above-mentioned regulations. Such content therefore did not preclude the samples being designated 'bread', and as a consequence they were subject to requirements under the Weights and Measures Act.

The County Public Control Officer submitted 123 samples for examination. 119 consisted of petrol samples of which 5 were rejected because of irregularities in star ratings, mainly due to the malfunctions of blender pumps. Two 2-stroke petrols were examined, one being found to be deficient in lubricant. A deposit found in the distilled water container of a garage was found to consist of bacteria of the Actinomycetales order. A paraffin was tested for smoke

point and compliance with the British Standard Specifications 2869:1970.

The following table summarises the samples submitted by the City and County Consumer protection departments.

#### City Protection Department

| Sample                 | No. submitted | No. unsatisfactory |
|------------------------|---------------|--------------------|
| Petros                 | 98            | 4                  |
| 2 stroke fuel          | 1             | .                  |
| White Spirit           | 1             | .                  |
| Paraffin               | 3             | .                  |
| Distilled Water        | 11            | 9                  |
| Antifreeze (Radiator)  | 1             | .                  |
| Car Paints, etc.       | 6             | .                  |
| John Innes Composts    | 4             | .                  |
| Wigs                   | 2             | .                  |
| Polish                 | 2             | 2                  |
| Vinyl coated Wallpaper | 1             | 1                  |
| 'Gold' Chain           | 1             | 1                  |
| Toys                   | 6             | .                  |
| Matches                | 1             | 1                  |
| Cushion                | 1             | 1                  |
| Bleach                 | 2             | .                  |
| Cosmetics              | 4             | 1                  |
| Foods                  | 5             | .                  |
|                        | 150           | 20                 |

#### County Public Control Department

| Sample          | No. submitted | No. unsatisfactory |
|-----------------|---------------|--------------------|
| Petros          | 119           | 5                  |
| 2-stroke fuels  | 2             | 1                  |
| Paraffins       | 1             | .                  |
| Distilled Water | 1             | 1                  |
|                 | 123           | 7                  |

**Miscellaneous samples examined for Corporation Departments**

| <i>Health Department</i>                        |      |      |
|---|------|------|
| Atmospheric Pollution samples                   | 2782 |      |
| Blood-Urine samples for Lead-Mercury content    | 127  |      |
| City Supply waters for bacteriological purity   | 602  |      |
| Swimming Bath waters                            | 77   |      |
| Waters (effluents, leakage waters, sewage etc.) | 18   |      |
| Miscellaneous samples                           | 100  | 3706 |
| <i>Public Protection Department</i>             |      |      |
| See Trades Description Act for details          | 130  | 130  |
| <i>Welfare Department</i>                       |      |      |
| Boiler Waters                                   | 98   | 98   |
| <i>Central Purchasing Department</i>            |      |      |
| Preserves                                       | 25   |      |
| Soup  | 1    |      |
| Textured Protein                                | 1    |      |
| Dried Milk                                      | 1    |      |
| Antifreeze                                      | 7    |      |
| Detergents                                      | 5    |      |
| Cleaning Materials                              | 18   |      |
| Bleaches  | 3    | 61   |
| <i>Education Department</i>                     |      |      |
| Fibres  | 1    | 1    |
| <i>City Architect's Department</i>              |      |      |
| Waters  | 3    |      |
| Painted Timber and Paint                        | 2    |      |
| Mortar  | 1    | 6    |
| <i>City Engineer's Department</i>               |      |      |
| Cellar Water                                    | 1    |      |
| Fuel Oils                                       | 2    | 3    |
| <i>City Estates Department</i>                  |      |      |
| Cellar Water                                    | 1    |      |
| Soils   | 329  | 330  |
| <i>Housing Department</i>                       |      |      |
| Plant Waters                                    | 2    | 2    |
| <i>Safety Officer</i>                           |      |      |
| Asbestos  | 1    | 1    |
| <i>Water Department</i>                         |      |      |
| Soil  | 1    | 1    |

**Samples examined for other Local Authorities**

|                                       |     |
|---------------------------------------|-----|
| Ashby R.D.C.                          | 7   |
| Ashby U.D.C.                          | 8   |
| Barrow R.D.C.                         | 9   |
| Billesdon R.D.C.                      | 52  |
| Blaby R.D.C.                          | 14  |
| Castle Donington R.D.C.               | 4   |
| Coalville U.D.C.                      | 18  |
| Daventry C.B.C.                       | 1   |
| Hinckley U.D.C.                       | 152 |
| Leicestershire County Council         | 154 |
| Loughborough M.B.                     | 2   |
| Lutterworth R.D.C.                    | 10  |
| Market Bosworth R.D.C.                | 17  |
| Melton & Belvoir R.D.C.               | 4   |
| Melton Mowbray U.D.C.                 | 4   |
| Northampton R.D.C.                    | 1   |
| North West Leicestershire Water Board | 210 |
| West Kesteven                         | 1   |
| Wigston U.D.C.                        | 2   |
|                                       | 670 |

**Consulting Service**

| <i>Food and Drug Samples</i>                  |     |     |
|---|-----|-----|
| Flour Confectionery                           | 6   |     |
| Meat Products                                 | 50  |     |
| Milk Products, Cheese etc.                    | 8   |     |
| Sugar, Soft Drinks                            | 3   |     |
| Herbs, Spices, Pickles etc.                   | 5   |     |
| Cereals                                       | 6   |     |
| Medical Preparations                          | 28  | 106 |
| <i>Miscellaneous Samples</i>                  |     |     |
| Waters, effluents, sewages etc.               | 146 |     |
| Clothing, fabrics, man-made fibres etc.       | 15  |     |
| Cements, Concretes, Aggregates, Deposits etc. | 70  |     |
| Timber, Paper etc.                            | 36  |     |
| Metals  | 1   |     |
| Industrial Chemicals                          | 51  |     |
| Petrol, Fuel oils etc.                        | 32  |     |
| Fertilisers                                   | 2   |     |
| Blood and Urines for Alcohol                  | 231 | 584 |



Table 1 Number of routine samples of raw and final waters examined during the year ended 31st December, 1971.

| Source of Sample                   |                                      |    |    |
|------------------------------------|--------------------------------------|----|----|
| Waters before and during treatment | Bacterio-Chemical logical Biological |    |    |
| Swithland reservoir                | 46                                   | 49 | 53 |
| Cropston reservoir                 | 85                                   | 89 | 70 |
| Thornton reservoir                 | 94                                   | 95 | 80 |

| Waters in supply                    |     |     |     |
|-------------------------------------|-----|-----|-----|
| River Dove Water Board Aqueduct     | 48  | 52  | 1   |
| Derwent Valley Water Board Aqueduct | 87  | 100 | .   |
| Hallgates Filter Station            | 87  | 100 | .   |
| Thornton Treatment Works            | 94  | 103 | .   |
| Service Reservoirs                  | 176 | 210 | .   |
| Totals                              | 717 | 798 | 204 |

I am indebted to Mr. J. W. Seddon, B.Sc., C.Eng., F.I.C.E., M.I.Mech.E., M.I.W.E., Water Engineer, for the following report on the work of his Department during 1971.

- 1 a The water supply of the area has been generally satisfactory in
  - (i) quality and (ii) quantity.
- b Regular cleansing of service reservoirs and distribution mains has continued throughout the year. Pyrethrin was applied at a dose of 0.01 mg per litre for a period of 5 days commencing 20th September 1971 in order to control *Asellus aquaticus* in the distribution system. Contamination of three service reservoirs resulted from a burst main at Scraptoft in August 1971 and was rectified by chlorination of the reservoirs.
- c (i) At 31st March 1971 the number of dwelling houses supplied in the City of Leicester was 95,454 and the population was 276,690.  
 (ii) Houses supplied by standpipes are not recorded separately but as far as is known there are none.
- d Fluoride tests were not done in 1971. Fluoridation of the City supply has not yet been implemented.

- 2 a Full details of bacteriological and chemical examinations of raw and treated water are given in the enclosed Summary of Water Examinations for 1971.
- b No instance of plumbosolvency has been reported.

## WATER SUPPLIES

Table 2 Summary of bacteriological examinations

### Water before treatment Frequency distribution

| Source                         | No. of Samples | Presumptive Coliform organisms MPN per 100 ml |     |       |      |       | Presumptive Esch. Coli, type 1 MPN per 100 ml |     |       |      |       | No. of Samples | Agar plate count per ml (24 h at 37°C) |       |      |       |
|--------------------------------|----------------|---|-----|-------|------|-------|---|-----|-------|------|-------|----------------|--|-------|------|-------|
|                                |                | 0   | 1-9 | 10-99 | 100+ | 1000+ | 0   | 1-9 | 10-99 | 100+ | 1000+ |                | 0-9                                    | 10-99 | 100+ | 1000+ |
| Thornton Impounding Reservoir  | 95             | 9   | 23  | 21    | 31   | 11    | 20  | 20  | 17    | 29   | 9     | 95             | 0                                      | 40    | 55   | .     |
| Swithland Impounding Reservoir | 49             | .   | 8   | 14    | 22   | 5     | 1   | 9   | 13    | 21   | 5     | 49             | 9                                      | 35    | 5    | .     |
| Cropston Impounding Reservoir  | 89             | 3   | 23  | 26    | 29   | 8     | 6   | 25  | 29    | 25   | 4     | 89             | 26                                     | 57    | 6    | .     |

Table 3 Summary of bacteriological examinations

### Water in supply Frequency distribution

| Source  | No. of Samples | Coliform organisms MPN per 100 ml |     |      |     | Esch. Coli Type 1 MPN per 100 ml |     |      |     | No. of Samples | Agar plate count per ml (24 h at 37°C) |       |      |  |
|---|----------------|-----------------------------------|-----|------|-----|----------------------------------|-----|------|-----|----------------|--|-------|------|--|
|   |                | 0                                 | 1-2 | 3-10 | 10+ | 0                                | 1-2 | 3-10 | 10+ |                | 0-9                                    | 10-99 | 100+ |  |
| Thornton Final water at Works                     | 99             | 99                                | .   | .    | .   | 99                               | .   | .    | .   | 99             | 74                                     | 24    | 1    |  |
| Dove Treated water aqueduct at Hallgates          | 52             | 52                                | .   | .    | .   | 52                               | .   | .    | .   | 52             | 43                                     | 9     | .    |  |
| Derwent Treated water aqueduct at Hallgates       | 100            | 100                               | .   | .    | .   | 100                              | .   | .    | .   | 99             | 99                                     | .     | .    |  |
| Hallgates Final water at Works                    | 100            | 100                               | .   | .    | .   | 100                              | .   | .    | .   | 100            | 96                                     | 4     | .    |  |
| Hallgates No. 4 Reservoirs Blended supply to City | 155            | 155                               | .   | .    | .   | 155                              | .   | .    | .   | 155            | 153                                    | 2     | .    |  |

Table 4 Average chemical analyses of waters in supply 1971

Results in parts per million (mg. per litre)

|  | Thornton<br>final water<br>at Works | Dove<br>final water<br>at Works | Dove<br>aqueduct<br>at Hallgates | Derwent<br>aqueduct<br>at Hallgates | Hallgates<br>final water<br>at Works |
|--|-------------------------------------|---------------------------------|----------------------------------|-------------------------------------|--------------------------------------|
| pH Value   | 7.4                                 | 7.85                            | 7.8                              | 9.0                                 | 7.4                                  |
| Electrical Conductivity (Micromhos/Cm <sup>3</sup> ) | 585                                 | 575                             | 565                              | 140                                 | 415                                  |
| Colour (Hazen units)                                 | 8                                   | 5-                              | 6                                | 5                                   | 6                                    |
| Turbidity (E.B.C. units)                             | 0.34                                | 0.05                            | 0.09                             | 0.06                                | 0.06                                 |
| Nitrogen (as N) Ammoniacal                           | 0.02                                | 0.03                            | .                                | 0.01                                | .                                    |
| Albuminoid   | 0.02                                | 0.13                            | .                                | 0.02                                | .                                    |
| Nitrite  | 0.000                               | 0.000                           | .                                | 0.000                               | .                                    |
| Nitrate  | .                                   | 2.6                             | .                                | 0.3                                 | .                                    |
| Permanganate Value (as O)                            | 2.7                                 | 1.2                             | .                                | 0.6                                 | 1.2                                  |
| Total Alkalinity (as CaCO <sub>3</sub> )             | 98                                  | 134                             | 136                              | 13                                  | 81                                   |
| Hardness (as CaCO <sub>3</sub> ) Carbonate           | 98                                  | 134                             | 136                              | 13                                  | 81                                   |
| Non-carbonate  | 139                                 | 145                             | 149                              | 36                                  | 112                                  |
| Total  | 237                                 | 279                             | 285                              | 49                                  | 193                                  |
| Calcium  | 148                                 | 209                             | 213                              | 34                                  | 123                                  |
| Magnesium  | 89                                  | 70                              | 72                               | 15                                  | 70                                   |
| Total Dissolved Solids (at 180°C)                    | 420                                 | 415                             | 410                              | 90                                  | .                                    |
| Silica (as SiO <sub>2</sub> )                        | .                                   | 3.8                             | .                                | 4.9                                 | .                                    |
| Chloride (as Cl)                                     | 73                                  | 40                              | 42                               | 12                                  | 40                                   |
| Sulphate (as SO <sub>4</sub> )                       | 100                                 | 117                             | 108                              | 33                                  | 81                                   |
| Phosphate (as PO <sub>4</sub> )                      | .                                   | 0.03                            | .                                | .                                   | .                                    |
| Sodium (as Na)                                       | 40                                  | 16                              | 18                               | 6                                   | .                                    |
| Iron (as Fe)   | 0.04                                | 0.02                            | 0.03                             | 0.02                                | 0.03                                 |
| Manganese (as Mn)                                    | 0.04                                | 0.00                            | 0.00                             | 0.03                                | 0.01                                 |
| Aluminium (as A1)                                    | 0.14                                | .                               | .                                | 0.05                                | 0.12                                 |
| Residual Chlorine Free                               | 0.5                                 | 0.3                             | 0.05                             | 0.0                                 | 2.5                                  |
| Total  | 0.75                                | 0.45                            | 0.2                              | 0.0                                 | 2.8                                  |
| Synthetic Detergent (as Manoxol)                     | .                                   | 0.04                            | .                                | 0.02                                | .                                    |

Table 5 Average analysis of blended supply to Leicester 1971

The table shows the analytical averages for 1971 of the blended supply from the Hallgates Service Reservoirs and the highest and lowest monthly averages or individual results during the year.  
 Results in milligrams per litre (parts per million) unless otherwise stated.

|  | No. of Tests | Results to nearest | Lowest  | Highest | Average |
|--|--------------|--------------------|---------|---------|---------|
| pH Value   | 139          | 0.05               | 7.55    | 7.95    | 7.8     |
| Electrical Conductivity (micromhos/Cm <sup>3</sup> ) | 139          | 5                  | 340     | 370     | 355     |
| Colour (Hazen Units)                                 | 139          | 1                  | below 5 | 6       | below 5 |
| Turbidity (E.B.C. Units)                             | 139          | 0.01               | 0.05    | 0.16    | 0.08    |
| Nitrogen (as N)                                      |              |                    |         |         |         |
| Ammoniacal   | 10           | 0.01               | 0.00    | 0.03    | 0.01    |
| Albuminoid   | 9            | 0.01               | 0.03    | 0.11    | 0.05    |
| Nitrite  | 9            | 0.001              | 0.000   | 0.000   | 0.000   |
| Nitrate  | 9            | 0.1                | 0.5     | 1.5     | 1.1     |
| Permanganate Value (as O)                            | 10           | 0.1                | 0.7     | 1.2     | 0.9     |
| Total Alkalinity (as CaCO <sub>3</sub> )             | 10           | 1                  | 65      | 82      | 72      |
| Hardness (as CaCO <sub>3</sub> )                     |              |                    |         |         |         |
| Carbonate  | 10           | 1                  | 65      | 82      | 72      |
| Non-carbonate  | .            | 1                  | 88      | 101     | 94      |
| Total  | 96           | 1                  | 156     | 172     | 166     |
| Calcium  | 10           | 1                  | 108     | 124     | 119     |
| Magnesium  | .            | 1                  | 42      | 52      | 47      |
| Total Dissolved Solids (at 180°C)                    | 3            | 5                  | 200     | 260     | 220     |
| Silica (as SiO <sub>2</sub> )                        | 3            | 0.1                | 3.4     | 4.5     | 4.0     |
| Chloride (as Cl)                                     | 10           | 1                  | 25      | 30      | 27      |
| Sulphate (as SO <sub>4</sub> )                       | 3            | 1                  | 65      | 73      | 69      |
| Sodium (as Na)                                       | 3            | 1                  | 10      | 14      | 12      |
| Iron (as Fe)   | 46           | 0.01               | 0.02    | 0.04    | 0.03    |
| Manganese (as Mn)                                    | 44           | 0.01               | 0.01    | 0.03    | 0.02    |
| Aluminium (as Al)                                    | 45           | 0.01               | 0.01    | 0.07    | 0.04    |
| Synthetic Detergents (as Manoxol)                    | 3            | 0.01               | 0.00    | 0.07    | 0.04    |
| Residual Chlorine: Free                              | 139          | 0.05               | 0.05    | 0.35    | 0.15    |
| Total  | 139          | 0.05               | 0.02    | 0.55    | 0.3     |

Number of samples examined 139

I am indebted to Mr. W. R. Shirrefs, T.D., M.I.C.E., M.I.Mun.E., A.M.P.T.I. for the following statement on sewage disposal.

Sewerage improvement schemes estimated to cost £436,000, (excluding washlands and brook improvements) were in progress or completed during 1971-72.

The main purposes of these schemes were to enable development to proceed or to alleviate flooding.

A number of instances of pollution were thoroughly investigated and measures put into effect to prevent any recurrence, where this was possible.

The sewage treatment plant at Wanlip continued to function satisfactorily and the effluent produced complied fully with the current standards required.

However, tertiary treatment is to be installed in the near future in order to improve the effluent to the standard required by the Trent River Authority in 1975.

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## Miscellaneous Services

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## Cremation

I am indebted to Mr. D. G. Clarke, Superintendent Registrar for the following information:

|   | 1971 | 1970 | 1969 | 1968 | 1967 |
|---|------|------|------|------|------|
| Yearly figures of cremations at the Leicester Crematorium | 3190 | 3110 | 3148 | 3071 | 2728 |
| Registration area of cremations                           |      |      |      |      |      |
| City residents  | 2202 | 2140 | 2182 | 2088 | 1900 |
| Non-city residents  | 988  | 970  | 966  | 983  | 828  |

## Re-housing on Medical Grounds

A total of 180 applications were received, and in view of the very small number of houses available strict criteria have to be adopted for recommendation to the Housing Committee. Thirty-one cases were considered, and of these 26 were approved. However, only ten were actually rehoused during 1971 after approval. Of the remaining 16, one applicant died and four are waiting for special requirement to fall vacant in a narrow geographical area. Two owner occupiers are waiting for the legal formalities of the purchase of their property to be completed by the Town Clerk's department or Estates department. One did not reply to the offer of accommodation. The remaining 8, three of which were only approved at the meeting on 31.12.71 are awaiting rehousing in 1972.

Of the outstanding cases from 1970, eight have been rehoused. The remainder either refused the offered accommodation or are awaiting placement within a limited area.

## Applications received during 1970 and 1971

| Total Number | Number of cases considered by Housing Committee | Number of cases approved by Housing Committee | Number of cases re-housed |           |
|--------------|---|---|---------------------------|-----------|
|              |   |   | Number                    | re-housed |
| 1970         | 218   | 41  | 39                        | 17        |
| 1971         | 180   | 31  | 26                        | 18*       |

\* This figure includes 8 cases which were approved in 1970.

## Superannuation Medical Examination

|                                    | 1971 | 1970 |
|------------------------------------|------|------|
| Number of Questionnaires submitted | 1066 | 1121 |
| Candidates medically examined      | 155  | 111  |
| Failed                             | 11   | 3    |
| Deferred                           | 21   | 14   |

## Driving Licences for Epileptics

### Application for Driving Licences Jan. - Dec. 1971

|  |    |
|--|----|
| Number of applications                                 | 53 |
| (This includes one for a Diabetic <i>not</i> epilepsy) |    |
| Number refused   | 11 |
| Number withdrawn                                       | 2  |
| Granted for three years                                | 15 |
| (This includes the diabetic)                           |    |
| Granted for one year                                   | 25 |

1971 was the first complete year for assessing epileptics for driving licences. A total of 53 applications was received, one not being epileptic. 11 of these did not fulfil the criteria and were refused. 15 were granted a licence for three years and 25, who had controlled epilepsy, a licence for one year in the first instance.

The numbers referred for investigation appears to be rather small in view of the fact that there are 26,000 applications for licences each year and of them 12,000 are for first licences. Some doubt must be expressed as to whether all epileptics holding licences or applying for an initial licence have divulged the information required on the application form.

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|------------------------------------|-------------|----------------------------------|-------------|-------------------------------|-------------|
| Abortion                           | 19          | District Nurse Training School   | 39          | Ice cream                     | 119         |
| Accidents                          | 82, 83      | Dressing disposal service        | 42          | Illegitimacy                  | 20, 21      |
| Accidents—road traffic             | 48, 49      | Driving licences for epileptics  | 146         | Immigration                   | 54          |
| Adoption                           | 22          | Drugs                            | 86          | Improvement grants            | 99          |
| Ambulance Service                  | 43          | Epidemiology                     | 46          | Infectious diseases           | 50          |
| Ante-natal classes                 | 28          |                                  |             | Insect control                | 93          |
| Audiology                          | 18          |                                  |             | Introductory letter           | 5           |
| BCG vaccination                    | 63, 75      |                                  |             |                               |             |
| Blind persons                      | 12          |                                  |             |                               |             |
| British Red Cross Society          | 42          | Factories Act 1961               | 101         | Laundry service               | 42          |
| Caravans—Itinerants                | 81          | Fertilisers and Feeding Stuffs   |             | Lectures                      | 95          |
| Care and after-care                | 41          | Regulations                      | 66, 135     | Legal proceedings             | 94          |
| Care of mothers and young children | 14          | Flying squad                     | 25          | Leprosy                       | 54          |
| Cervical cytology                  | 49          | Food and drugs                   | 100         |                               |             |
| Chiropody service                  | 42          | Food and Drugs Act 1955          | 104, 111    |                               |             |
| Cholera                            | 58          | Food-additives and Preservations | 120         | Mass Radiography Unit         | 68          |
| City Analyst                       | 110         | defective Composition            | 124         | Meat-contract supplies        | 89          |
| Clearance areas                    | 78, 96      | hygiene                          | 90          | hygiene                       | 89          |
| Clinics—ante-natal                 | 28          | poisoning                        | 53          | imported                      | 89          |
| attendances                        | 30          | Food Hygiene (general)           |             | inspection                    | 87          |
| audiology                          | 18          | Regulations 1970                 | 91, 105     | slaughtering                  | 87          |
| child health                       | 27          | Fumes and vapour                 | 85          | Medical equipment loan        | 42          |
| cytology                           | 28, 49      | Furnace installations            | 84          | Midwifery                     | 25          |
| development                        | 17          |                                  |             | Milk                          | 86, 116     |
| Common lodging house               | 81          | Geriatric care                   | 58          | Mobile food shops             | 90          |
| Compulsory removal                 | 41          | Grit                             | 85          | Multiple occupation           | 79, 80      |
| Congenital malformations           | 16          |                                  |             |                               |             |
| Consumer protection                | 86, 136     | Handicapped children             | 17          | Noise                         | 85          |
| Cremation                          | 146         | Health Committee                 | 3           | Nursing agencies—registration | 34          |
| Deaths—age-specific rates          | 47, 48      | Health education                 | 28, 91      | Nursing homes—registration    | 34          |
| causes of                          | 9           | Health visiting                  | 27          | Nursing Services              | 24          |
| infant                             | 15          | Housing Act. 1964                | 79          |                               |             |
| maternal                           | 8, 25       | Housing Act. 1969                | 78          |                               |             |
| Dairies                            | 86          | Housing—clearance areas          | 78, 96      | Observation register          | 17          |
| Dental report                      | 22          | improvements                     | 78          | Offices, Shops & Railway      |             |
| Diocese of Leicester Council for   |             | new building                     | 94          | Premises Act 1963             | 82, 100     |
| Social Work                        | 21          | repair and maintenance           | 78          | Outworkers                    | 82, 100     |

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|--------------------------------|-------------|-------------------------------------|--------------|------------------------------|-------------|
| Pasteurised foods              | 118         | Senior public health officers       | 4            | Training—ambulance personnel | 44          |
| Pest control                   | 91          | Sewerage                            | 144          | district nurses              | 29          |
| Pigeons                        | 93          | Shell fish                          | 117          | equipment                    | 44          |
| Poisoning                      | 51          | Showmen's guild site                | 82           | midwives                     | 26          |
| Population                     | 56, 84, 134 | Slaughter-meat                      | 87, 107, 108 | Tuberculosis                 | 55, 61      |
| poultry                        |             |                                     | 87           |                              |             |
| Public Health and Food         |             | Smallpox vaccination                | 58           |                              |             |
| Inspection Department          | 76          | Smoke-control                       | 102, 103     |                              |             |
|                                |             | domestic                            | 84           | Vaccination and immunisation | 58, 72      |
| Radio/telephone communications | 44          | industrial                          | 84           | Venereal disease             | 69          |
| Re-housing on medical grounds  | 146         | Superannuation medical examinations | 146          |                              |             |
| Renal dialysis                 | 35          | Swimming pools                      | 81           |                              |             |
| Rent Act 1957                  | 100         |                                     |              |                              |             |
| Restaurants                    | 90          | Toxic metals                        | 127          | Water-drinking               | 118         |
| Road Safety Act 1967           | 133         | Trade Descriptions Act 1968         | 86           | supplies                     | 139         |



